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USER'S MANUAL FOR THE AFSATCOM TERMINAL UPGRADES LIFE CYCLE COST MODEL

APPENDIX D
PREPROCESSOR FORTRAN SOURCE CODE

APPENDIX E
LCC PROGRAM FORTRAN SOURCE CODE

APPENDIX F
RLA PROGRAM FORTRAN SOURCE CODE

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By
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Prepared for

DEPUTY FOR COMMUNICATIONS AND INFORMATION SYSTEMS
ELECTRONIC SYSTEMS DIVISION
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Hanscom Air Force Base, Massachusetts

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This volume of the User's Manual for the AFSATCOM Terminal Upgrades Life Cycle Cost Model contains listings of the FORTRAN source code for the three programs comprising the Model. These three programs are the Preprocessor, the LCC Program, and the RLA Program.

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ABSTRACT

This volume of the User's Manual for the AFSATCOM Terminal Upgrades Life Cycle Cost Model contains listings of the FORTRAN source code for the three programs comprising the Model. These three programs are the Preprocessor, the LCC Program, and the RLA Program.

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The authors wish to express their appreciation to the many people whose efforts contributed to the preparation of the AFSATCOM Terminal Upgrades Life Cycle Cost Model.

The Model is comprised of three programs: the Preprocessor, the LCC Program, and the RLA Program. The LCC Program, the heart of the Model, is actually a fourth generation AUTOLCC model. The original version was designed and implemented by Dick Moynihan and Joyce Calabro. The second version was modified by Josh Seeger and C. C. Cho and implemented by Mary Jean Hayes. The third version was designed by Jane Cox and Dave Peters and coded by Joyce Calabro, Sharon Rawls, and Lucille Record.

The fourth and current version of the LCC Program was adapted from the previous versions by the authors and implemented by Virginia Day and Mary Jean Hayes. The RLA Program was designed and implemented by C. C. Cho and Mary Jean Hayes.

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APPENDIX D

PREPROCESSOR FORTRAN SOURCE CODE

```
C     ********************************************************************************
C     *                  ATU LCC MODEL PREPROCESSOR                                  *
C     *                                                                              *
C     *     THIS PREPROCESSOR PERFORMS TWO BASIC FUNCTIONS:                          *
C     *                                                                              *
C     * 1)  CREATING AN ITEM-IN-PLATFORM MATRIX IN UNIT 21 GIVEN:                    *
C     *        LRU-IN-PLATFORM MATRIX (UNIT 25) AND                                  *
C     *        SRU-IN-LRU MATRIX (UNIT 26).                                          *
C     * 2)  CHECKING UNITS 18,19,20,22,25 AND 26 FOR INPUT FILE                      *
C     *     FORMAT ERRORS.  IN PARTICULAR, THE FOLLOWING ERROR                       *
C     *     CONDITIONS ARE CHECKED FOR:                                              *
C     *                                                                              *
C     *       - MULTIPLE CARDS FOR AN ITEM NUMBER                                    *
C     *       - MORE ITEMS IN A FILE THAN IN THE INITIAL FILE                        *
C     *       - ITEMS NOT APPEARING IN THE INITIAL ITEM FILE BUT                     *
C     *            FOUND IN OTHER FILES                                              *
C     *       - FEWER ITEMS IN A FILE THAN IN THE INITIAL FILE                       *
C     *       - ITEMS NOT APPEARING IN A FILE BUT NOT FOUND IN THE                   *
C     *            INITIAL FILE                                                      *
C     *       - SRU ITEMS IN LRU ITEM LISTS                                          *
C     *       - LRU ITEMS IN SRU ITEM LISTS                                          *
C     *       - ITEM NUMBERS OUT OF SEQUENCE IN A FILE                               *
C     *       - ITEM INDICIES OUT OF RANGE                                           *
C     *       - MORE THAN THE MAXIMUM NUMBER OF ITEMS IN THE INITIAL                 *
C     *            FILE                                                              *
C     *       - MORE THAN THE MAXIMUM NUMBER OF SRUS IN AN LRU IN                    *
C     *            THE LRU/SRU CROSS REFERENCE FILE (UNIT 12)                        *
C     *       - END OF FILE FOUND BEFORE THE END OF THE SRU LIST                     *
C     *            FOR AN LRU IN THE LRU/SRU CROSS REFERENCE FILE                    *
C     *       - MISSING END-OF-FILE MARKER IN A FILE                                 *
C     *                                                                              *
C     ********************************************************************************

      COMMON ITEM(150,2),NERR,YET(150),LASTI,MAXI
      LOGICAL ITEM,YET,WROTE
      REAL NITEM(150,5),INPVEC(28),XCOL1,QPA(30)
      INTEGER INITEM(5)
      INTEGER I,IL,ILOOP,NDS,K,NP,LRU,NUMITM,NUMLRU,ISRU(30)
      INTEGER NERR,LASTI,MAXI,MAXNDS,MAXNP,NRM,IRM,NRMM1,IPAGE
      DATA STAR/1H*/,BLANK/1H /
```

```
1     FORMAT(A1,I3,39X,I2)
2     FORMAT(A1,I3,12F4.2)
3     FORMAT(A1)
4     FORMAT(A1,I3,I2,14(I3,F2.0))
5     FORMAT(A1,I3)
6     FORMAT(/24H PROCESSING COMPLETED.  ,I3,17H ERRORS DETECTED.)
7     FORMAT(/49H OUTPUT FILE (ITEMS IN PLATFORMS) NOT WRITTEN DUE/
     +17X,10HTO ERRORS./)
8     FORMAT(/53H OUTPUT FILE (ITEMS IN PLATFORMS) WRITTEN TO UNIT 21./)
9     FORMAT(/1H ,I3,10H LRUS AND ,I3,29H SRUS READ FROM INITIAL FILE.)
10    FORMAT(/41H ATU LCC PREPROCESSOR -- EXECUTION BEGINS)
11    FORMAT(A1,I3,12I4)
12    FORMAT(1H ,I5,12F7.2)
13    FORMAT(1H1////////////////////
     +44X,44H**********************************************************/
     +44X,1H*,42X,1H*/
     +44X,44H*          ATU LIFE CYCLE COST MODEL          */
     +44X,44H*               PREPROCESSOR                  */
     +44X,1H*,42X,1H*/
     +44X,44H**********************************************************/)
14    FORMAT(1H1,6X,44H PREPROCESSOR INPUT FILE:  DATA FILE 11B -- ,
     +35HLRU ITEM CONFIGURATION ON PLATFORMS///)
15    FORMAT(1H1,4X,45H PREPROCESSOR OUTPUT FILE:  DATA FILE 11A -- ,
     +31HITEM CONFIGURATION ON PLATFORMS///)
16    FORMAT(A1,I3,I2,I2)
17    FORMAT(A1,5X,14(I3,F2.0))
18    FORMAT(1H1/30X,70HPREPROCESSOR INPUT FILE:  DATA FILE 8B -- LRU/SR
     +U CROSS REFERENCE DATA)
19    FORMAT(59X,11H(CONTINUED)//)
20    FORMAT(//9X,4H#SRU,4X,12HSRU    SRU  ,3X,12HSRU    SRU  ,3X,12HSRU
     +    SRU  ,3X,12HSRU    SRU  ,3X,12HSRU    SRU  ,3X,12HSRU    SRU
     +,3X,12HSRU    SRU  /1X,3HLRU,5X,5HTYPES,3X,12HINDEX  QUAN-,3X,12HI
     +NDEX  QUAN-,3X,12HINDEX  QUAN-,3X,12HINDEX  QUAN-,3X,12HINDEX  QUA
     +N-,3X,12HINDEX  QUAN-,3X,12HINDEX  QUAN-/1X,5HINDEX,3X,6HP LRU,2X
     +,12HNO.    TITY ,3X,12HNO.    TITY ,3X,12HNO.    TITY ,3X,12HNO.
     +  TITY ,3X,12HNO.    TITY ,3X,12HNO.    TITY ,3X,11HNO.    TITY/1X
     +,4H(IL),4X,5H(NDS),3X,12H(ISRU) (QPA),3X,12H(ISRU) (QPA),3X,12H(IS
     +RU) (QPA),3X,12H(ISRU) (QPA),3X,12H(ISRU) (QPA),3X,12H(ISRU) (QPA)
     +,3X,12H(ISRU) (QPA)//)
21    FORMAT(2X,I3,5X,I3,5X,I3,3X,F4.0,5X,I3,3X,F4.0,5X,I3,3X,F4.0,5X,I3
     +,3X,F4.0,5X,I3,3X,F4.0,5X,I3,3X,F4.0,5X,I3,3X,F4.0/18X,I3,3X,F4.0,
     +5X,I3,3X,F4.0,5X,I3,3X,F4.0,5X,I3,3X,F4.0,5X,I3,3X,F4.0,5X,I3,3X,F
     +4.0,5X,I3,3X,F4.0)
22    FORMAT(18X,I3,3X,F4.0,5X,I3,3X,F4.0,5X,I3,3X,F4.0,5X,I3
     +,3X,F4.0,5X,I3,3X,F4.0,5X,I3,3X,F4.0,5X,I3,3X,F4.0/18X,I3,3X,F4.0,
     +5X,I3,3X,F4.0,5X,I3,3X,F4.0,5X,I3,3X,F4.0,5X,I3,3X,F4.0,5X,I3,3X,F
     +4.0,5X,I3,3X,F4.0)
```

```
23    FORMAT(7H   ITEM,16X,40HAVERAGE NUMBER OF LRU ITEMS INSTALLED ON,
     +14H PLATFORM TYPE/,8H   INDEX,15X,50(1H-)/,7H    (I),I4,11I7//)
24    FORMAT(7H   ITEM,16X,36HAVERAGE NUMBER OF ITEMS INSTALLED ON,
     +14H PLATFORM TYPE/,8H   INDEX,15X,50(1H-)/,7H    (I),I4,11I7//)
25    FORMAT(/45H ********** THE REMAINDER OF FILE 8B NOT READ)

C     MAXI HOLDS THE MAXIMUM NUMBER AND INDEX OF ITEMS

      MAXI=150

C     MAXNDS HOLDS THE MAXIMUM NUMBER OF SRUS IN AN LRU

      MAXNDS=30

C     MAXNP HOLDS THE MAXIMUM NUMBER OF PLATFORM TYPES

      MAXNP=5

      NERR=0
      NUMLRU=0
      NUMITM=0
      WROTE=.FALSE.
      DO 30 NP=1,MAXNP

C        INITEM WILL HOLD THE ITEM-IN-PLATFORM DATA IN INTEGER FORMAT

         INITEM(NP)=0

30    CONTINUE

      DO 36 ILOOP=1,MAXI

C        NITEM(I,NP) WILL HOLD THE ITEM-IN-PLATFORM DATA

         DO 33 NP=1,MAXNP
            NITEM(ILOOP,NP)=0.
33       CONTINUE

C        ITEM(I,1) WILL INDICATE WHETHER ITEM(I) WAS IN INITIAL FILE

         ITEM(ILOOP,1)=.FALSE.

C        ITEM(I,2) IS .TRUE. IF ITEM(I) IS AN LRU

         ITEM(ILOOP,2)=.FALSE.
```

```
C         YET(I) WILL INDICATE WHETHER ITEM(I) WAS IN A PARTICULAR FILE

          YET(ILOOP)=.FALSE.

36     CONTINUE

C      PLEASE ANNOUNCE US

       WRITE(7,13)
       WRITE(6,10)

C      READ IN THE INITIAL DATA FROM UNIT 18

       REWIND 18
       LASTI=0
       DO 50 ILOOP=1,MAXI
          READ(18,1) XCOL1,I,LRU
          IF(XCOL1.EQ.STAR) GO TO 100
          IF (I.GT.0.AND.I.LE.MAXI) GO TO 40

C         ITEM INDEX OUT OF RANGE.  NOTIFY AND SKIP TO NEXT CARD

             CALL ERROR(8,I,18)
             GO TO 50
40        CONTINUE

          ITEM(I,1)=.TRUE.

C         CHECK IF THIS ITEM IS AN LRU.  IF SO, MARK AND COUNT IT

          IF(LRU.NE.1) GO TO 45
             ITEM(I,2)=.TRUE.
             IF (.NOT.YET(I)) NUMLRU=NUMLRU+1

45        CONTINUE

          IF (.NOT.YET(I)) NUMITM=NUMITM+1
          CALL CHECK1(I,18)

50     CONTINUE

C      IF WE GET HERE THEN THERE WERE TOO MANY RECORDS IN THE FILE

       CALL ERROR(11,0,18)

100    CONTINUE
```

```
      I=NUMITM-NUMLRU
      WRITE(6,9) NUMLRU,I

C     READ IN THE LRU IN PLATFORM MATRIX

      REWIND 25
      CALL CLRYET

C     LABEL THE INPUT TABLE

      WRITE(7,14)
      WRITE(7,23) (I,I=1,MAXNP)
      IPAGE=0
      LASTI=0
      DO 200 ILOOP=1,NUMLRU
         READ(25,2) XCOL1,IL,(NITEM(IL,NP),NP=1,MAXNP)
         IF (XCOL1.NE.STAR) GO TO 120

C        IF WE FOUND A STAR, THEN THERE ARE TOO FEW ITEMS IN THIS FILE

            CALL ERROR(13,IL,25)

C           NOW CHECK WHICH ITEMS ARE MISSING FROM THIS FILE

            DO 110 IL=1,MAXI
               IF (ITEM(IL,2).AND..NOT.YET(IL)) CALL ERROR(4,IL,25)
110         CONTINUE

C           ESCAPE.  JUMP TO NEXT FILE

            GO TO 210

120      CONTINUE

C        ECHO PRINT THE FILE
         WRITE(7,12) IL,(NITEM(IL,NP),NP=1,MAXNP)
         IPAGE=IPAGE+1
         IF (IPAGE.LT.40) GO TO 130
            WRITE(7,14)
            WRITE(7,19)
            WRITE(7,23) (J1,J1=1,MAXNP)
            IPAGE=0

130      CONTINUE
```

```
          IF (IL.GT.0.AND.IL.LE.MAXI) GO TO 140

C            ITEM INDEX OUT OF RANGE.  NOTIFY AND SKIP TO NEXT CARD

             CALL ERROR(8,IL,25)
             GO TO 200
140       CONTINUE

          CALL CHECK1(IL,25)

C         CHECK IF THIS LRU ITEM IS MARKED AS AN LRU IN INITIAL FILE
C         (THIS FILE SHOULD HAVE ONLY LRU ITEMS)

          IF (ITEM(IL,1).AND..NOT.ITEM(IL,2)) CALL ERROR(3,IL,25)

200    CONTINUE

C      WE SHOULD BE AT THE BOTTOM OF THE FILE.

       READ(25,2) XCOL1,IL,(INPVEC(J1),J1=1,MAXNP)
       IF (XCOL1.EQ.STAR) GO TO 210

C         WE WEREN'T.  READ ON, ERROR CHECKING AS BEFORE.

          CALL ERROR(12,0,25)
206       CONTINUE

          IF (IL.GT.0.AND.IL.LE.MAXI) GO TO 207

C            ITEM INDEX OUT OF RANGE.  NOTIFY AND SKIP TO NEXT RECORD

             CALL ERROR(8,IL,25)
             GO TO 208

207       CONTINUE

C         NOW THAT WE KNOW THAT WE HAVE A LEGAL SUBSCRIPT

          DO 998 J1=1,MAXNP
             NITEM(IL,J1)=INPVEC(J1)
998       CONTINUE
```

```
C        ECHO PRINT THE FILE

         IPAGE=IPAGE+1
         WRITE(7,12) IL,(NITEM(IL,NP),NP=1,MAXNP)
         IF (IPAGE.LT.40) GO TO 150
            WRITE(7,14)
            WRITE(7,19)
            WRITE(7,23) (J1,J1=1,MAXNP)
            IPAGE=0

150      CONTINUE

         CALL CHECK1(IL,25)

C        CHECK AGAIN IF THIS LRU ITEM IS MARKED AS AN LRU IN INITIAL
C        FILE (THIS FILE SHOULD HAVE ONLY LRU ITEMS)

         IF (ITEM(IL,1).AND..NOT.ITEM(IL,2)) CALL ERROR(3,IL,25)

208      CONTINUE

         READ(25,5) XCOL1,IL

C        CHECK IF WE ARE AT THE END-OF-FILE MARKER OR END OF DATA

         IF (XCOL1.NE.STAR.AND.IL.NE.0) GO TO 206

C        IF WE RAN OUT OF DATA WITHOUT A MARKER, NOTIFY

         IF (XCOL1.NE.STAR) CALL ERROR(9,0,25)

210   CONTINUE

C     READ IN THE LRU/SRU CROSS REFERENCE TABLE

      REWIND 26
      CALL CLRYET

C     LABLE THE OUTPUT

      WRITE(7,18)
      WRITE(7,20)
      IPAGE=0

      LASTI=0
```

```
      DO 300 ILOOP=1,NUMLRU
         READ(26,4) XCOL1,IL,NDS,(ISRU(K),QPA(K),K=1,14)
         IF (XCOL1.NE.STAR) GO TO 225
C           IF WE FOUND A STAR, THEN THERE ARE TOO FEW ITEMS HERE
            CALL ERROR(13,0,26)
C           ESCAPE.  JUMP TO NEXT FILE
            GO TO 310
225      CONTINUE
C        ECHO PRINT THE DATA
         IPAGE=IPAGE+1
         WRITE(7,21) IL,NDS,(ISRU(J1),QPA(J1),J1=1,14)
         IF (IPAGE.LT.40) GO TO 226
            WRITE(7,18)
            WRITE(7,19)
            WRITE(7,20)
            IPAGE=0
226      CONTINUE
         IF (IL.GT.0.AND.IL.LE.MAXI) GO TO 227
C           INDEX IS OUT OF RANGE.  NOTIFY AND SKIP TO NEXT RECORD
            CALL ERROR(8,IL,26)
            GO TO 300
227      CONTINUE
         CALL CHECK1(IL,26)
C        CHECK IF THIS LRU ITEM IS MARKED AS AN LRU IN INITIAL FILE
         IF (ITEM(IL,1).AND..NOT.ITEM(IL,2)) CALL ERROR(3,IL,26)
C        CHECK IF THE NUMBER OF SRUS IN THIS LRU EXCEEDS THE LIMIT
         IF (NDS.LE.MAXNDS) GO TO 228
            CALL ERROR(15,IL,26)
```

```
C           SET NDS TO MAXNDS.  THIS WILL GIVE SOME ERROR CHECKING
C           OF THE SRU LIST.  NOTE THAT ADDITIONAL CARDS WILL BE READ
C           AS LISTS FOR AN ITEM INDEXED ZERO, GENERATING MESSAGES.

            NDS=MAXNDS

228       CONTINUE

C         READ IN THE REST OF THE SRU DATA, OFF OF SUBSEQUENT CARDS
C              IF NECESSARY

          J2=14
          J3=14

230       CONTINUE

C         CHECK IF THERE ARE MORE CARDS TO READ

          IF(.NOT.(NDS.GT.J3.AND.NDS.LE.MAXNDS)) GO TO 240
             J2=J3+1
             J3=J2+13
             READ(26,17) XCOL1,(ISRU(J1),QPA(J1),J1=J2,J3)
             WRITE(7,22) (ISRU(J1),QPA(J1),J1=J2,J3)
             IF (XCOL1.NE.STAR) GO TO 230

             CALL ERROR(16,IL,26)

C            ESCAPE TO NEXT FILE

             GO TO 310

240       CONTINUE

C         THIS NEXT SET OF CODE IS THE ONLY CALCULATION DONE BY THIS
C         PROGRAM.  IF THERE ARE ANY SRUS IN THIS LRU, THEN THEY ARE
C         ADDED INTO THE ITEM-IN-PLATFORM MATRIX

          IF (NDS.EQ.0) GO TO 250
            DO 248 K=1,NDS
              IF (ISRU(K).GT.0.AND.ISRU(K).LE.MAXI) GO TO 244

C               INDEX OUT OF RANGE.  NOTIFY AND JUMP TO NEXT SRU

                CALL ERROR(6,IL,26)
                GO TO 248

244           CONTINUE
```

```
C            CHECK IF THIS SRU ITEM APPEARS IN THE INITIAL FILE

             IF (.NOT.ITEM(ISRU(K),1)) CALL ERROR(2,K,26)

C            CHECK IF THIS SRU ITEM IS MARKED AS AN SRU IN INITIAL FILE

             IF (ITEM(ISRU(K),1).AND.ITEM(ISRU(K),2)) CALL ERROR(7,K,26)

             DO 246 NP=1,MAXNP
               NITEM(ISRU(K),NP)=NITEM(ISRU(K),NP)+QPA(K)*NITEM(IL,NP)
246          CONTINUE

248        CONTINUE

250      CONTINUE

300   CONTINUE

C     THIS SHOULD BE THE END OF THE FILE

      READ(26,3) XCOL1
      IF (XCOL1.EQ.STAR) GO TO 305

C        IT WASN'T.  NOTIFY, AND SKIP TO NEXT FILE

         CALL ERROR(12,0,26)
         WRITE(7,25)

305   CONTINUE

C     CHECK TO SEE IF WE MISSED ANY LRUS ALONG THE WAY

      DO 310 IL=1,MAXI
         IF (ITEM(IL,2).AND..NOT.YET(IL)) CALL ERROR(4,IL,26)
310   CONTINUE

C     WRITE OUT THE ITEM IN PLATFORM FILE TO UNIT 21 AND THE OFFLINE
C     PRINTER ONLY IF WE HAVE NOT ENCOUNTERED ANY ERRORS YET.

      IF (NERR.NE.0) GO TO 314

C        'WROTE' FLAGS THAT WE WROTE THE FILE

         WROTE=.TRUE.
         REWIND 18
```

```
C         LABEL THE OUTPUT

          WRITE(7,15)
          WRITE(7,24) (I,I=1,MAXNP)
          IPAGE=0

          DO 313 ILOOP=1,NUMITM
             READ(18,5) XCOL1,I

C               PRINT WITHOUT DECIMAL POINT IN A FIELD OF WIDTH FOUR

                DO 312 NP=1,MAXNP
                   INITEM(NP)=INT(0.5+100*NITEM(I,NP))
312             CONTINUE

                IPAGE=IPAGE+1
                WRITE(21,11) BLANK,I,(INITEM(NP),NP=1,MAXNP)
                WRITE(7,12) I,(NITEM(I,NP),NP=1,MAXNP)
                IF (IPAGE.LT.40) GO TO 313
                   WRITE(7,15)
                   WRITE(7,19)
                   WRITE(7,24) (J1,J1=1,MAXNP)
                   IPAGE=0

313       CONTINUE

          WRITE(21,3) STAR

314    CONTINUE

C      CHECK THIS SUPPORT EQUIPMENT PER ITEM FILE FOR CONSISTENCY

       REWIND 20
       CALL CLRYET

       DO 400 ILOOP=1,NUMITM
          READ(20,16) XCOL1,I,NRM,IRM
          IF(XCOL1.NE.STAR) GO TO 320

C            IF WE FOUND A STAR THEN THERE ARE TOO FEW ITEMS HERE

             CALL ERROR(13,0,20)

C            ESCAPE.  JUMP TO NEXT FILE

             GO TO 410
```

```
320      CONTINUE

         IF (I.GT.0.AND.I.LE.MAXI) GO TO 340

C           INDEX OUT OF RANGE.  NOTIFY AND GO TO NEXT INDEX RECORD

            CALL ERROR(8,I,20)
            GO TO 345

340      CONTINUE

         CALL CHECK1(I,20)

345      CONTINUE

C        SKIP NRM-1 LINES TO GET TO THE NEXT ITEM INDEX

C        THIS GOTO IS TO A POINT INSIDE OF THE FOLLOWING DO LOOP,
C        ONLY TO INSURE CHECKING OF THE CURRENT IRM VALUE.

         IF (NRM.EQ.1) GO TO 350

         NRMM1=NRM-1
         DO 360 K=1,NRMM1
            READ(20,16) XCOL1,IL,NRM,IRM

            IF (IL.EQ.0.AND.NRM.EQ.0) GO TO 350
               CALL ERROR(10,I,20)

C              IT IS TOO DIFFICULT TO ANTICIPATE EXACTLY WHAT THE
C              ERROR WAS AND TO LOCATE THE NEXT "CORRECT" RECORD,
C              SO THE REST OF THE FILE IS NOT READ.

               GO TO 415

350         CONTINUE
            IF (IRM.LT.1.OR.IRM.GT.4) CALL ERROR(14,I,20)

360      CONTINUE

400   CONTINUE
```

```
      READ(20,16) XCOL1,I,NRM,IRM

C     WE SHOULD BE AT THE END OF THE FILE

      IF (XCOL1.EQ.STAR) GO TO 410

C        WE WEREN'T.  NOTIFY, AND READ ON, ERROR CHECKING

         CALL ERROR(12,0,20)

402      CONTINUE
         IF (I.GT.0.AND.I.LE.MAXI) GO TO 404

C           INDEX OUT OF RANGE.  NOTIFY, AND GO TO NEXT RECORD

            CALL ERROR(8,I,20)
            GO TO 406

404      CONTINUE

         CALL CHECK1(I,20)

406      CONTINUE

C        SKIP NRM-1 LINES TO GET TO THE NEXT ITEM INDEX

C        THIS GOTO IS TO A POINT INSIDE OF THE FOLLOWING DO LOOP,
C        ONLY TO INSURE CHECKING OF THE CURRENT IRM VALUE.

         IF (NRM.EQ.1) GO TO 408

         NRMM1=NRM-1
         DO 409 K=1,NRMM1
            READ(20,16) XCOL1,IL,NRM,IRM

            IF (IL.EQ.0.AND.NRM.EQ.0) GO TO 408
               CALL ERROR(10,I,20)

C              IT IS TOO DIFFICULT TO ANTICIPATE EXACTLY WHAT THE
C              ERROR WAS AND TO LOCATE THE NEXT "CORRECT" RECORD,
C              SO THE REST OF THE FILE IS NOT READ.

               GO TO 510

408         CONTINUE
            IF (IRM.LT.1.OR.IRM.GT.4) CALL ERROR(14,I,20)
409      CONTINUE
```

```
         READ(20,16) XCOL1,I,NRM,IRM
C        CHECK IF AT END OF FILE OR END OF DATA
         IF (XCOL1.NE.STAR.AND.I.NE.0) GO TO 402
C        IF AT END OF DATA BUT NOT END OF FILE THEN MARKER MISSING
         IF (XCOL1.NE.STAR) CALL ERROR(9,0,20)
410   CONTINUE
C     CHECK IF WE MISSED ANY ITEMS ALONG THE WAY
      CALL CHECK2(20)
415   CONTINUE
C     CHECK THIS BY-ITEM FILE FOR CONSISTENCY
      REWIND 22
      CALL CLRYET
      DO 500 ILOOP=1,NUMITM
         READ(22,5) XCOL1,I
         IF(XCOL1.NE.STAR) GO TO 420
C           IF WE FOUND A STAR THEN THERE ARE TOO FEW ITEMS HERE
            CALL ERROR(13,0,22)
C           ESCAPE.  JUMP TO NEXT FILE
            GO TO 510
420      CONTINUE
         IF (I.GT.0.AND.I.LE.MAXI) GO TO 440
C           INDEX OUT OF RANGE.  NOTIFY AND GO TO NEXT RECORD
            CALL ERROR(8,I,22)
            GO TO 500
440      CONTINUE
         CALL CHECK1(I,22)
500   CONTINUE
```

```
      READ(22,5) XCOL1,I
C     WE SHOULD BE AT THE END OF THE FILE
      IF (XCOL1.EQ.STAR) GO TO 510
C        WE WEREN'T.  NOTIFY, AND READ ON, ERROR CHECKING
         CALL ERROR(12,0,22)
505      CONTINUE
         IF (I.GT.0.AND.I.LE.MAXI) GO TO 507
C           INDEX OUT OF RANGE.  NOTIFY AND GO TO NEXT RECORD
            CALL ERROR(8,I,22)
            GO TO 508
507      CONTINUE
         CALL CHECK1(I,22)
508      CONTINUE
         READ(22,5) XCOL1,I
C        CHECK IF AT END OF FILE OR END OF DATA
         IF (XCOL1.NE.STAR.AND.I.NE.0) GO TO 505
C        IF AT END OF DATA BUT NOT END OF FILE THEN MARKER MISSING
         IF (XCOL1.NE.STAR) CALL ERROR(9,0,22)
510   CONTINUE
C     CHECK IF WE MISSED ANY ITEMS ALONG THE WAY
      CALL CHECK2(22)
C     CHECK THIS BY-ITEM FILE FOR CONSISTENCY
      REWIND 19
      CALL CLRYET
```

```
      DO 600 ILOOP=1,NUMITM
         READ(19,5) XCOL1,I
         IF(XCOL1.NE.STAR) GO TO 520

C           IF WE FOUND A STAR THEN THERE ARE TOO FEW ITEMS HERE

            CALL ERROR(13,0,19)

C           ESCAPE.  JUMP TO NEXT FILE.

            GO TO 610

520      CONTINUE
         IF (I.GT.0.AND.I.LE.MAXI) GO TO 540

C           INDEX OUT OF RANGE.  NOTIFY AND GO TO NEXT FILE

            CALL ERROR(8,I,19)
            GO TO 600

540      CONTINUE

         CALL CHECK1(I,19)

600   CONTINUE

      READ (19,5) XCOL1,I

C     WE SHOULD BE AT THE END OF THE FILE

      IF (XCOL1.EQ.STAR) GO TO 610

C        WE WEREN'T.  NOTITY AND READ ON, ERROR CHECKING

         CALL ERROR(12,0,19)

605      CONTINUE
         IF (I.GT.0.AND.I.LE.MAXI) GO TO 607

C           INDEX OUT OF RANGE.  NOTIFY AND GO TO NEXT RECORD

            CALL ERROR(8,I,19)
            GO TO 608

607      CONTINUE
         CALL CHECK1(I,19)
```

```
608       CONTINUE
          READ(19,5) XCOL1,I

C         CHECK IF AT END OF FILE OR END OF DATA

          IF (XCOL1.NE.STAR.AND.I.NE.0) GO TO 605

C         IF AT END OF DATA BUT NOT END OF FILE THEN MARKER MISSING

          IF (XCOL1.NE.STAR) CALL ERROR(9,0,19)

610   CONTINUE

C     CHECK IF WE MISSED ANY ITEMS ALONG THE WAY

      CALL CHECK2(19)

C     GIVE THE NEWS

      WRITE(6,6) NERR

      IF (WROTE) WRITE(6,8)
      IF (.NOT.WROTE) WRITE(6,7)

      STOP

      END
```

```
      SUBROUTINE ERROR(TYPE,LINE,FILE)

C     THIS SUBROUTINE PRINTS OUT THE ERROR MESSAGES AND TALLIES
C     THE NUMBER OF ERRORS.

      COMMON ITEM(150,2),NERR,YET(150),LASTI,MAXI
      INTEGER TYPE,LINE,FILE,MAXI,NERR
      LOGICAL ITEM,YET

1     FORMAT(/24H *ERROR  1* ITEM NUMBER ,I3,23H HAS TWO CARDS IN UNIT ,
     +I2)
2     FORMAT(/31H *ERROR  2* A NEW ITEM INDEXED ,I3,9H APPEARS ,
     +8HIN UNIT ,I2)
3     FORMAT(/25H *ERROR  3* AN SRU (ITEM ,I3,21H) APPEARS IN THE LRU ,
     +13HLIST IN UNIT ,I2)
4     FORMAT(/17H *ERROR  4* ITEM ,I3,22H IS MISSING FROM UNIT ,I2)
5     FORMAT(/17H *ERROR  5* ITEM ,I3,28H IS OUT OF SEQUENCE IN UNIT ,
     +I2)
6     FORMAT(/51H *ERROR  6* INVALID SRU INDEX IN LIST FOR LRU ITEM ,I3,
     +9H IN UNIT ,I2)
7     FORMAT(/25H *ERROR  7* AN LRU (ITEM ,I3,20H) APPEARS IN THE SRU,
     +14H LIST IN UNIT ,I2)
8     FORMAT(/32H *ERROR  8* INVALID ITEM INDEX (,I4,10H) APPEARS ,
     +8HIN UNIT ,I2)
9     FORMAT(/53H *ERROR  9* END OF FILE MARKER (*) MISSING FROM UNIT ,
     +I2)
10    FORMAT(/38H *ERROR 10* FILE FORMAT ERROR IN UNIT ,I2,5H: NRM/
     +17X,15HVALUE FOR ITEM ,I3,17H IS INCONSISTENT./
     +17X,39HTHE REMAINDER OF THIS FILE IS NOT READ.)
11    FORMAT(/53H *ERROR 11* ITEM DESCRIPTION FILE CONTAINS MORE THAN /
     +17X,29HTHE ALLOWABLE NUMBER OF ITEMS)
12    FORMAT(/17H *ERROR 12* UNIT ,I2,26H CONTAINS MORE ITEMS THAN ,
     +12HINITIAL FILE)
13    FORMAT(/17H *ERROR 13* UNIT ,I2,27H CONTAINS FEWER ITEMS THAN ,
     +12HINITIAL FILE)
14    FORMAT(/44H *ERROR 14* IRM VALUE OUT OF RANGE FOR ITEM ,I3/
     +17X,8HIN UNIT ,I2)
15    FORMAT(/16H *ERROR 15* LRU ,I3,24H CONTAINS TOO MANY SRUS ,
     +8HIN UNIT ,I2)
16    FORMAT(/52H *ERROR 16* END OF FILE FOUND BEFORE END OF SRU LIST/
     +17X,8HFOR LRU ,I3,9H IN UNIT ,I2)

      IF (TYPE.EQ.1)  WRITE(6,1) LINE,FILE
      IF (TYPE.EQ.2)  WRITE(6,2) LINE,FILE
      IF (TYPE.EQ.3)  WRITE(6,3) LINE,FILE
      IF (TYPE.EQ.4)  WRITE(6,4) LINE,FILE
      IF (TYPE.EQ.5)  WRITE(6,5) LINE,FILE
```

```
IF (TYPE.EQ.6)  WRITE(6,6) LINE,FILE
IF (TYPE.EQ.7)  WRITE(6,7) LINE,FILE
IF (TYPE.EQ.8)  WRITE(6,8) LINE,FILE
IF (TYPE.EQ.9)  WRITE(6,9) FILE
IF (TYPE.EQ.10) WRITE(6,10) FILE,LINE
IF (TYPE.EQ.11) WRITE(6,11)
IF (TYPE.EQ.12) WRITE(6,12) FILE
IF (TYPE.EQ.13) WRITE(6,13) FILE
IF (TYPE.EQ.14) WRITE(6,14) LINE,FILE
IF (TYPE.EQ.15) WRITE(6,15) LINE,FILE
IF (TYPE.EQ.16) WRITE(6,16) LINE,FILE

IF (TYPE.EQ.1)  WRITE(7,1) LINE,FILE
IF (TYPE.EQ.2)  WRITE(7,2) LINE,FILE
IF (TYPE.EQ.3)  WRITE(7,3) LINE,FILE
IF (TYPE.EQ.4)  WRITE(7,4) LINE,FILE
IF (TYPE.EQ.5)  WRITE(7,5) LINE,FILE
IF (TYPE.EQ.6)  WRITE(7,6) LINE,FILE
IF (TYPE.EQ.7)  WRITE(7,7) LINE,FILE
IF (TYPE.EQ.8)  WRITE(7,8) LINE,FILE
IF (TYPE.EQ.9)  WRITE(7,9) FILE
IF (TYPE.EQ.10) WRITE(7,10) FILE,LINE
IF (TYPE.EQ.11) WRITE(7,11)
IF (TYPE.EQ.12) WRITE(7,12) FILE
IF (TYPE.EQ.13) WRITE(7,13) FILE
IF (TYPE.EQ.14) WRITE(7,14) LINE,FILE
IF (TYPE.EQ.15) WRITE(7,15) LINE,FILE
IF (TYPE.EQ.16) WRITE(7,16) LINE,FILE

NERR=NERR+1

RETURN

END
```

```
      SUBROUTINE CLRYET

C     THIS SUBROUTINE 'CLEARS OUT' YET(150) BY SETTING TO .FALSE.
C     AND RESETS LASTI TO 0.

      COMMON ITEM(150,2),NERR,YET(150),LASTI,MAXI
      INTEGER I,NERR,MAXI,LASTI
      LOGICAL YET,ITEM

      DO 10 I=1,MAXI
         YET(I)=.FALSE.
10    CONTINUE

      LASTI=0

      RETURN

      END
```

```
      SUBROUTINE CHECK1(I,FILE)

C     THIS SUBROUTINE PERFORMS ERROR TESTS ON ITEM I IN FILE 'FILE'

      COMMON ITEM(150,2),NERR,YET(150),LASTI,MAXI
      LOGICAL ITEM,YET
      INTEGER I,FILE,NERR,LASTI,MAXI

C     CHECK IF THIS ITEM IS IN SEQUENCE
      IF (I.LT.LASTI) CALL ERROR(5,I,FILE)
      LASTI=I

C     CHECK IF THIS ITEM APPEARED IN THE INITIAL FILE

      IF (.NOT.ITEM(I,1)) CALL ERROR(2,I,FILE)

C     CHECK IF THIS ITEM HAS ALREADY APPEARED IN THIS FILE

      IF (YET(I)) CALL ERROR(1,I,FILE)
      YET(I)=.TRUE.

      RETURN

      END
```

```
      SUBROUTINE CHECK2(FILE)

C     THIS SUBROUTINE CHECK WHICH ITEMS ARE MISSING FROM FILE 'FILE'.
C     NOTE THAT CHECK2 ONLY TEST FOR "ITEMNESS" AND NOT "LRUNESS", SO
C     THAT FILES INDEXED BY LRU ITEM ARE CHECKED IN THE MAIN PROGRAM.

      COMMON ITEM(150,2),NERR,YET(150),LASTI,MAXI
      INTEGER I,FILE,NERR,LASTI,MAXI
      LOGICAL ITEM,YET

      DO 10 I=1,MAXI
         IF (ITEM(I,1).AND..NOT.YET(I)) CALL ERROR(4,I,FILE)
10    CONTINUE

      RETURN

      END
```

APPENDIX E

LCC PROGRAM FORTRAN SOURCE CODE

```
C*************************************************************************
C                                                              810625 085747119
C*************************************************************************
      COMMON /LDFPR / LDFPR
      COMMON /LDSRU / LDSRU
      COMMON /LDFR  / LDFR
      COMMON /LDUP  / LDUP
      COMMON /LDCOND/ LDCOND
      COMMON /LDNRTS/ LDNRTS
      COMMON /LDRTS / LDRTS
      COMMON /LDRM  / LDRM
      COMMON /LDERV / LDERV
      COMMON /EXITXX/ EXITXX
      INTEGER EXITXX
      COMMON /ITERXX/ ITERXX
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      COMMON /RERDXX/ RERDXX
      INTEGER RERDXX
      COMMON /NERRXX/ NERRXX
      COMMON /NERRYY/ NERRYY
      COMMON /REDOXX/ REDOXX
      INTEGER REDOXX
C
    1 FORMAT(1H1//22H PROGRAM STOPS DUE TO ,I4,
     +  16H ERRORS ON INPUT)
C
C
C
C
C*************************************************************************
C*  INITIALIZE SENSITIVITY PRINT PARAMETERS                              *
C*************************************************************************
C
      CALL SSETXX
C
C
C
C*************************************************************************
C*  EACH PASS THROUGH THIS LOOP REPRESENTS A SINGLE LCC CALCULATION      *
C*************************************************************************
```

```
C
      DO 888 ITERXX=1,50
C
C
C
C*****************************************************************************
C*  PROMPT THE USER FOR CONTROL VARIABLES PRNTXX,MAXPMT,XTITLE,RERDXX, *
C*  AND FULLXX.                                                          *
C*****************************************************************************
C
      EXITXX=0
      CALL PRMPT1
C
C
C
C*****************************************************************************
C*  IF THIS IS THE FIRST ITERATION OR IF THE USER REQUESTED TO          *
C*  REREAD THE FILES, INITIALIZE VARIABLES AND READ THE INPUT FILES     *
C*****************************************************************************
C
      IF(PRNTXX.NE.0) CALL TITLE
      IF(ITERXX.NE.1.AND.RERDXX.NE.1) GO TO 2
      CALL INITAL
      NERRXX=0
      REWIND 11
      REWIND 12
      REWIND 13
      REWIND 14
      REWIND 15
      REWIND 16
      REWIND 17
      REWIND 18
      REWIND 19
      REWIND 20
      REWIND 21
      REWIND 22
      CALL READ1
      CALL READ2
      CALL READ3
      CALL READ4
      CALL READ5
      CALL READ6
      CALL READ7
      CALL READ8
      CALL READ9A
      CALL READ9B
      CALL READ10
```

```
      CALL READ11
      NERRYY=NERRXX
    2 CONTINUE
C
C
C
C*****************************************************************************
C*  READ NAMELISTS /GO1/, /GO2/ AND /SENS/ TO OVERRIDE                       *
C*   VARIABLE VALUES WITH INTERACTIVE INPUTS AND TO SET SENSITIVITY          *
C*  OUTPUT FLAGS.                                                            *
C*****************************************************************************
C
      CALL PRMPT2
      IF(EXITXX.EQ.1) GO TO 6
      CALL PRMPT3
      IF(EXITXX.EQ.1) GO TO 6
C
C
C
C*****************************************************************************
C*  PERFORM ANY ERROR CHECKS OR CALCULATIONS WHICH SHOULD                     *
C*  BE PERFORMED BEFORE THE INPUT TABLES ARE PRINTED.                         *
C*****************************************************************************
C
      CALL INITAX
C
C
C
C*****************************************************************************
C*  PRINT THE INPUT DATA VALUES.                                             *
C*****************************************************************************
C
      CALL ERRCK1
      CALL RLCOMP
      CALL OTABST
      CALL ITAB1A
      CALL ITAB1B
      CALL ITAB1C
      CALL ITAB2
      CALL ITAB3
      CALL ITAB4
      CALL ITAB5
      CALL ITAB6
      CALL ITAB7
      CALL ITAB8
      CALL ITAB9A
      CALL ITAB9B
```

```
      CALL ITB10A
      CALL ITB10B
      CALL ITB10C
      CALL ITB10D
      CALL ITAB11
C
C
C
C*************************************************************************************
C*  STOP IF ANY ERRORS WERE FOUND ON INPUT.                                          *
C*************************************************************************************
C
      NERRXX=NERRYY
      IF(NERRXX.EQ.0) GO TO 4
        WRITE(6,1) NERRXX
        IF(PRNTXX.NE.0) WRITE(7,1) NERRXX
        STOP
    4 CONTINUE
C
C
C
C*************************************************************************************
C*  LCC CALCULATIONS                                                                 *
C*************************************************************************************
C
      CALL ZFAIL
      CALL ZNFB
      CALL ZERHB
      CALL ZERHSE
      CALL ZISET
      CALL ZUSE
      CALL ZTYPE
      CALL ZTFR
      CALL ZSECI
      CALL ZPMEQ
      CALL ZTISQ
      CALL ZYRSQ
      CALL ZTOTPQ
      CALL ZLC
      CALL COST1
      CALL COST2
      CALL COST3
      CALL COST4
      CALL COST5
      CALL COST6
      CALL COST7
      CALL COST8
```

```
      CALL COST9
      CALL COST10
      CALL COST11
C
C
C
C*************************************************************************************
C*  SENSITIVITY CALCULATIONS                                                         *
C*************************************************************************************
C
      CALL DPIUP
      CALL DDMF
      CALL DRM
      CALL DXRM
      CALL DXUC
      IF (LDUP  .NE.0.OR.(PRNTXX.NE.0.AND.LDERV .NE.0)) CALL DUP
      CALL DFR
      CALL DXFR
      CALL DFPR
      CALL DXFPR
      IF (LDRTS .NE.0.OR.(PRNTXX.NE.0.AND.LDERV .NE.0)) CALL DRTS
      IF (LDNRTS.NE.0.OR.(PRNTXX.NE.0.AND.LDERV .NE.0)) CALL DNRTS
      IF (LDCOND.NE.0.OR.(PRNTXX.NE.0.AND.LDERV .NE.0)) CALL DCOND
      IF (LDSRC .NE.0.OR.(PRNTXX.NE.0.AND.LDERV .NE.0)) CALL DSRC
      CALL DXMIL
C
C
C
C*************************************************************************************
C*  TELL THE USER TO ADJUST TERMINAL TO A NEW PAGE                                   *
C*************************************************************************************
C
      CALL PRMPT4
      IF(EXITXX.EQ.1) GO TO 6
C
C
C
C*************************************************************************************
C*  PRINT OUTPUT TABLES AT TERMINAL AND/OR OFFLINE PRINTER                           *
C*************************************************************************************
C
      CALL OTAB1
      CALL OTAB2
      CALL OTAB3A
      CALL OTAB3B
      CALL OTAB3C
      CALL OTAB4A
```

```
      CALL OTAB4B
      CALL OTAB4C
      CALL OTAB5
      CALL OTAB6
      CALL OTAB7
      CALL RLAPRT
      CALL PRMPT5
      IF(EXITXX.EQ.1) GO TO 6
C
C
C
C*****************************************************************************
C*  PRINT SENSITIVITY TABLE AT TERMINAL AND/OR OFFLINE PRINTER               *
C*****************************************************************************
C
      CALL OSENS
C
C
C
C*****************************************************************************
C*  ASK THE USER WHETHER ANOTHER RUN IS DESIRED.                             *
C*****************************************************************************
C
    6 CALL PRMPT6
      IF(REDOXX.EQ.0) GO TO 999
  888 CONTINUE
C
  999 STOP
C
      END
```

```
      SUBROUTINE READ1
C                                                          810625 084553224
C*****************************************************************************
C*   ATU MOD LCR                                                             *
C*  READS THE MISCELLANEOUS SCALAR DATA                                      *
C*  FILE FROM CHANNEL 11                                                     *
C*****************************************************************************
C
      COMMON /ACPP/ ACPP
      COMMON /BAA/ BAA
      COMMON /BDATA/ BDATA
      INTEGER BDATA
      COMMON /BF/ BF
      COMMON /BIRD/ BIRD
      COMMON /BLR/ BLR
      COMMON /BMF/ BMF
      COMMON /BRCT/ BRCT
      COMMON /CFG/ CFG(3)
      COMMON /CPD1/ CPD1
      COMMON /CPD2/ CPD2
      COMMON /CPPC/ CPPC
      COMMON /CPPD/ CPPD(3)
      COMMON /CRCT/ CRCT
      COMMON /DAA/ DAA
      COMMON /DAD/ DAD
      COMMON /DDATA/ DDATA
      INTEGER DDATA
      COMMON /DLR/ DLR
      COMMON /DMF/ DMF
      COMMON /DRCT/ DRCT(3)
      COMMON /FSEDC/ FSEDC
      COMMON /HPD1/ HPD1
      INTEGER HPD1
      COMMON /HPD2/ HPD2
      INTEGER HPD2
      COMMON /IMC/ IMC
      REAL IMC
      COMMON /KFAC/ KFAC(4)
      REAL KFAC
      COMMON /MILR/ MILR(3)
      REAL MILR
      COMMON /MRF/ MRF
      REAL MRF
      COMMON /MRO/ MRO
      REAL MRO
      COMMON /MUSE/ MUSE
      REAL MUSE
```

```
      COMMON /NRUC/ NRUC
      REAL NRUC
      COMMON /OST/ OST(3)
      COMMON /OSTC/ OSTC
      COMMON /PAL1/ PAL1
      COMMON /PAL2B/ PAL2B
      COMMON /PAL2D/ PAL2D
      COMMON /PIUP/ PIUP
      COMMON /PMLR/ PMLR
      COMMON /QTYP1/ QTYP1
      INTEGER QTYP1
      COMMON /QTYP2B/ QTYP2B
      INTEGER QTYP2B
      COMMON /QTYP2D/ QTYP2D
      INTEGER QTYP2D
      COMMON /R/ R
      INTEGER R
      COMMON /RCPP/ RCPP
      COMMON /RMC/ RMC
      COMMON /SA/ SA
      COMMON /SPC1/ SPC1
      INTEGER SPC1
      COMMON /SPC2/ SPC2
      INTEGER SPC2
      COMMON /SR/ SR
      COMMON /TEFM/ TEFM
      COMMON /TNLR/ TNLR
      COMMON /TORB/ TORB
      COMMON /TORD/ TORD
      COMMON /TR/ TR
      COMMON /TRAVB/ TRAVB
      COMMON /TRAV1D/ TRAV1D
      COMMON /TYP2TF/ TYP2TF
      COMMON /UCPP/ UCPP
      COMMON /XFPR/ XFPR
      COMMON /XFR/ XFR
      COMMON /XMIL/ XMIL
      COMMON /XUC/ XUC
      NAMELIST /MISC/ BF,BAA,BLR,BMF,BRCT,CFG,CPPC,CPPD,CRCT,DAA,DAD,DLR
     +,DMF,DRCT,IMC,KFAC,MILR,MUSE,NRUC,OST,OSTC,PIUP,PMLR,RMC,SA,TNLR,X
     +FPR,XFR,XMIL,XUC,HPD2,TORB,TORD,MRO,MRF,SR,TR,PAL1,PAL2B,PAL2D,TRA
     +V1D,TRAVB,ACPP,CPD2,RCPP,UCPP,BIRD,QTYP1,QTYP2B,QTYP2D,SPC2,TYP2TF
     +,BDATA,CPD1,DDATA,FSEDC,HPD1,R,SPC1,TEFM
C
C
      READ(11,MISC)
C
```

```
RETURN
END
```

```
      SUBROUTINE READ2
C                                                          810625 084600582
C*****************************************************************************
C*  ATU MOD LCR                                                              *
C*  READS THE BASE CONFIGURATION FILE                                        *
C*  FROM CHANNEL 12                                                          *
C*****************************************************************************
C
      COMMON /BNOUN/ BNOUN(10,16)
      COMMON /BPLAT/ BPLAT(10)
      INTEGER BPLAT
      COMMON /BSP/ BSP(10)
      INTEGER BSP
      COMMON /BTYPE/ BTYPE(10)
      INTEGER BTYPE
      COMMON /LO/ LO(10)
      COMMON /MXNS/ MXNS
      COMMON /NBC/ NBC(10)
      REAL NBC
      COMMON /NHB/ NHB(10)
      COMMON /NS/ NS
      COMMON /TNB/ TNB(10)
      COMMON /NERRXX/ NERRXX
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      DATA XXSTAR/1H*/
    1 FORMAT(A1,I2,16A1,F3.0,3I2,F3.0,2I2)
    2 FORMAT(A1)
    3 FORMAT(/49H UNIT 12 ERROR:  END OF FILE CARD NOT FOUND AFTER/
     +17X,37HMAXIMUM NUMBER OF CARDS WERE READ IN.)
C
C
      MXNS=0
      DO 210 NS=1,10
        READ(12, 1) XXCOL1,NS1,(BNOUN(NS,I1),I1=1,16),TNB(NS),LO(NS),
     +    BTYPE(NS),NHB(NS),NBC(NS),BPLAT(NS),BSP(NS)
        IF(XXCOL1.EQ.XXSTAR) RETURN
        MXNS=NS
  210 CONTINUE
C
      READ(12, 2) XXCOL1
      IF(XXCOL1.EQ.XXSTAR) RETURN
      NERRXX=NERRXX+1
      WRITE(6, 3)
      IF(PRNTXX.NE.0) WRITE(7, 3)
C
      RETURN
      END
```

```
      SUBROUTINE READ3
C                                                          810625 084601349
C*****************************************************************************
C*  READS THE PLATFORM OPERATIONAL DATA FILE                                 *
C*  FROM CHANNEL 13                                                          *
C*****************************************************************************
C
      COMMON /AMPM/ AMPM(5,3)
      COMMON /APFH/ APFH(5,3)
      COMMON /FGH/ FGH(5)
      COMMON /LE/ LE(5)
      COMMON /M/ M
      COMMON /MMPD/ MMPD(5,3)
      REAL MMPD
      COMMON /MMPM/ MMPM(5)
      REAL MMPM
      COMMON /MXNP/ MXNP
      COMMON /NP/ NP
      COMMON /PNOUN/ PNOUN(5,12)
      COMMON /TFAC/ TFAC(5)
      COMMON /THRS/ THRS(5)
      COMMON /NERRXX/ NERRXX
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      DATA XXSTAR/1H*/
    1 FORMAT(A1,I3,12A1,I2,3F4.0,F3.2,4X,F3.1,3F4.1,3F5.1,F7.0,F5.0)
    2 FORMAT(A1)
    3 FORMAT(/49H UNIT 13 ERROR:  END OF FILE CARD NOT FOUND AFTER/
     +17X,37HMAXIMUM NUMBER OF CARDS WERE READ IN.)
C
C
      MXNP=0
      DO 210 NP=1,5
        READ(13, 1) XXCOL1,NP1,(PNOUN(NP,K1),K1=1,12),LE(NP),(APFH(NP,
     +    M),M=1,3),TFAC(NP),MMPM(NP),(AMPM(NP,M),M=1,3),(MMPD(NP,M),
     +    M=1,3),THRS(NP),FGH(NP)
        IF(XXCOL1.EQ.XXSTAR) RETURN
        MXNP=NP
  210 CONTINUE
C
      READ(13, 2) XXCOL1
      IF(XXCOL1.EQ.XXSTAR) RETURN
      NERRXX=NERRXX+1
      WRITE(6, 3)
      IF(PRNTXX.NE.0) WRITE(7, 3)
C
      RETURN
      END
```

```
      SUBROUTINE READ4
C                                                          810625 084602489
C*****************************************************************************
C*   ATU MOD LCR                                                             *
C*  READS THE PLATFORM TERMINAL COST & NONRECURRING MOD/I                    *
C*  DATA FILE FROM CHANNEL 14                                                *
C*****************************************************************************
C
      COMMON /DRAG/ DRAG(5)
      COMMON /FR/ FR(3,5)
      COMMON /INTNR/ INTNR(5)
      REAL INTNR
      COMMON /INTR/ INTR(5)
      REAL INTR
      COMMON /K/ K(5)
      REAL K
      COMMON /M/ M
      COMMON /MXNP/ MXNP
      COMMON /NAE/ NAE(5)
      REAL NAE
      COMMON /NP/ NP
      COMMON /NRMI/ NRMI(5)
      REAL NRMI
      COMMON /NTRMP/ NTRMP(5)
      REAL NTRMP
      COMMON /PDIV/ PDIV(5)
      COMMON /NERRXX/ NERRXX
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      DATA XXSTAR/1H*/
    1 FORMAT(A1,I3,F4.2,F9.0,F8.0,F9.0,F4.2,3F3.2,F3.0,2F4.2)
    2 FORMAT(A1)
    3 FORMAT(/49H UNIT 14 ERROR:  END OF FILE CARD NOT FOUND AFTER/
     +17X,37HMAXIMUM NUMBER OF CARDS WERE READ IN.)
C
C
      MXNP=0
      DO 210 NP=1,5
        READ(14, 1) XXCOL1,NP1,NTRMP(NP),INTNR(NP),INTR(NP),NRMI(NP),
     +    PDIV(NP),(FR(M,NP),M=1,3),DRAG(NP),K(NP),NAE(NP)
        IF(XXCOL1.EQ.XXSTAR) RETURN
        MXNP=NP
  210 CONTINUE
C
      READ(14, 2) XXCOL1
      IF(XXCOL1.EQ.XXSTAR) RETURN
      NERRXX=NERRXX+1
      WRITE(6, 3)
```

```
      IF(PRNTXX.NE.0) WRITE(7, 3)
C
      RETURN
      END
```

```
      SUBROUTINE READ5
C                                                          810625 084605670
C*****************************************************************************
C*  ATU MOD LCR                                                              *
C*  READS THE PLATFORM RECURRING MOD/INSTALLATION                            *
C*  DATA FILE FROM CHANNEL 15                                                *
C*****************************************************************************
C
      COMMON /AKIT/ AKIT(4,5)
      COMMON /IA/ IA
      COMMON /M/ M
      COMMON /MIFIX/ MIFIX(3,5)
      REAL MIFIX
      COMMON /MIMH/ MIMH(4,3,5)
      REAL MIMH
      COMMON /MXNP/ MXNP
      COMMON /NP/ NP
      COMMON /NERRXX/ NERRXX
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      DATA XXSTAR/1H*/
    1 FORMAT(A1,I3,7F5.0,12F3.0)
    2 FORMAT(A1)
    3 FORMAT(/49H UNIT 15 ERROR:  END OF FILE CARD NOT FOUND AFTER/
     +17X,37HMAXIMUM NUMBER OF CARDS WERE READ IN.)
C
C
      MXNP=0
      DO 210 NP=1,5
        READ(15, 1) XXCOL1,NP1,(MIFIX(M,NP),M=1,3),(AKIT(IA,NP),IA=1,4),
     +    ((MIMH(IA,M,NP),IA=1,4),M=1,3)
        IF(XXCOL1.EQ.XXSTAR) RETURN
        MXNP=NP
  210 CONTINUE
C
      READ(15, 2) XXCOL1
      IF(XXCOL1.EQ.XXSTAR) RETURN
      NERRXX=NERRXX+1
      WRITE(6, 3)
      IF(PRNTXX.NE.0) WRITE(7, 3)
C
      RETURN
      END
```

```
      SUBROUTINE READ6
C                                                          810625 084607869
C*********************************************************************
C*  READS THE PLATFORM DEPLOYMENT AT BASES                           *
C*  DATA FILE FROM CHANNEL 10                                        *
C*********************************************************************
C
      COMMON /MXNP/ MXNP
      COMMON /NP/ NP
      COMMON /NPLT/ NPLT(5,10)
      REAL NPLT
      COMMON /NS/ NS
      COMMON /NERRXX/ NERRXX
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      DATA XXSTAR/1H*/
    1 FORMAT(A1,I3,16F4.2)
    2 FORMAT(A1)
    3 FORMAT(/49H UNIT 16 ERROR:  END OF FILE CARD NOT FOUND AFTER/
     +17X,37HMAXIMUM NUMBER OF CARDS WERE READ IN.)
C
C
      MXNP=0
      DO 210 NP=1,5
        READ(16, 1) XXCOL1,NP1,(NPLT(NP,NS),NS=1,10)
        IF(XXCOL1.EQ.XXSTAR) RETURN
        MXNP=NP
  210 CONTINUE
C
      READ(16, 2) XXCOL1
      IF(XXCOL1.EQ.XXSTAR) RETURN
      NERRXX=NERRXX+1
      WRITE(6, 3)
      IF(PRNTXX.NE.0) WRITE(7, 3)
C
      RETURN
      END
```

```
      SUBROUTINE READ7
C                                                          810625 084610000
C*****************************************************************************
C*  ATU MOD LCR                                                              *
C*  READS THE SUPPORT EQUIPMENT DATA                                         *
C*  FILE FROM CHANNEL 17                                                     *
C*****************************************************************************
C
      COMMON /CSE/ CSE(120)
      COMMON /DATAS/ DATAS(120)
      INTEGER DATAS
      COMMON /L/ L
      COMMON /MSE/ MSE(120)
      REAL MSE
      COMMON /MXL/ MXL
      COMMON /SEDEV/ SEDEV(120)
      COMMON /SEINO/ SEINO(120)
      INTEGER SEINO
      COMMON /SENOUN/ SENOUN(120,20)
      COMMON /SENUM/ SENUM(120,12)
      COMMON /SETYPE/ SETYPE(120)
      INTEGER SETYPE
      COMMON /NERRXX/ NERRXX
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      DATA XXSTAR/1H*/
    1 FORMAT(A1,I3,20A1,12A1,F7.0,F4.3,I2,I3,F8.0)
    2 FORMAT(A1)
    3 FORMAT(/49H UNIT 17 ERROR:  END OF FILE CARD NOT FOUND AFTER/
     +17X,37HMAXIMUM NUMBER OF CARDS WERE READ IN.)
C
C
      MXL=0
      DO 210 IXXX1=1,120
        READ(17, 1) XXCOL1,L,(SENOUN(L,I1),I1=1,20),(SENUM(L,I2),I2=1,
     +    12),CSE(L),MSE(L),SETYPE(L),DATAS(L),SEDEV(L)
        IF(XXCOL1.EQ.XXSTAR) RETURN
        MXL=IXXX1
        SEINO(IXXX1)=L
  210 CONTINUE
C
      READ(17, 2) XXCOL1
      IF(XXCOL1.EQ.XXSTAR) RETURN
      NERRXX=NERRXX+1
      WRITE(6, 3)
      IF(PRNTXX.NE.0) WRITE(7, 3)
C
```

```
RETURN
END
```

```
      SUBROUTINE READ8
C                                                                  810625 084611828
C*****************************************************************************
C*  ATU MOD LCR                                                              *
C*  READS THE ITEM EQUIPMENT DATA FILE                                       *
C*  FROM CHANNEL 18                                                          *
C*****************************************************************************
C
      COMMON /GFE/ GFE(150)
      INTEGER GFE
      COMMON /I/ I
      COMMON /INO/ INO(150)
      COMMON /INOUN/ INOUN(150,24)
      REAL INOUN
      COMMON /INTEG/ INTEG(150)
      REAL INTEG
      COMMON /LFAC/ LFAC(150)
      REAL LFAC
      COMMON /LRU/ LRU(150)
      COMMON /MXI/ MXI
      COMMON /NHI/ NHI(150)
      COMMON /PA/ PA(150)
      COMMON /PTNUM/ PTNUM(150,12)
      COMMON /RM/ RM(150)
      COMMON /UP/ UP(150)
      COMMON /WT/ WT(150)
      COMMON /NERRXX/ NERRXX
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      DATA XXSTAR/1H*/
    1 FORMAT(A1,I3,24A1,12A1,F3.2,I2,I3,2I2,F6.0,F4.3,F5.2,F4.2)
    2 FORMAT(A1)
    3 FORMAT(/49H UNIT 18 ERROR:  END OF FILE CARD NOT FOUND AFTER/
     +17X,37HMAXIMUM NUMBER OF CARDS WERE READ IN.)
C
C
      MXI=0
      DO 210 IXXX1=1,150
        READ(18, 1) XXCOL1,I,(INOUN(I,K1),K1=1,24),(PTNUM(I,K2),K2=1,
     +    12),LFAC(I),LRU(I),NHI(I),GFE(I),INTEG(I),UP(I),RM(I),WT(I),
     +    PA(I)
        IF(XXCOL1.EQ.XXSTAR) RETURN
        MXI=IXXX1
        INO(IXXX1)=I
  210 CONTINUE
C
      READ(18, 2) XXCOL1
```

```
      IF(XXCOL1.EQ.XXSTAR) RETURN
      NERRXX=NERRXX+1
      WRITE(6, 3)
      IF(PRNTXX.NE.0) WRITE(7, 3)
C
      RETURN
      END
```

```
      SUBROUTINE READ9A
C                                                                    810625 084615143
C*********************************************************************************
C*  READS THE ITEM MAINTENANCE DATA FILE                                         *
C*  FROM CHANNEL 19                                                              *
C*********************************************************************************
C
      COMMON /BCMH/ BCMH(150)
      COMMON /BMH/ BMH(150)
      COMMON /COND/ COND(150)
      COMMON /DMH/ DMH(150)
      COMMON /FPR/ FPR(150)
      COMMON /I/ I
      COMMON /INO/ IN (150)
      COMMON /IPCF/ IPCF(150)
      REAL IPCF
      COMMON /MTBMI/ MTBMI(150,4)
      REAL MTBMI
      COMMON /MXI/ MXI
      COMMON /NRTS/ NRTS(150)
      REAL NRTS
      COMMON /RIP/ RIP(150)
      COMMON /RL/ RL(150)
      INTEGER RL
      COMMON /RMH/ RMH(150)
      COMMON /RTS/ RTS(150)
      COMMON /WEAR/ WEAR(150)
      COMMON /NERRXX/ NERRXX
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      DATA XXSTAR 1H*/
    1 FORMAT(A1,I3,4F8.0,F4.3,F3.2,F5.2,3F4.3,4F4.2,I1)
    2 FORMAT(A1)
    3 FORMAT(/49H UNIT 19 ERROR:  END OF FILE CARD NOT FOUND AFTER/
     +17X,37HMAXIMUM NUMBER OF CARDS WERE READ IN.)
    4 FORMAT(1X,37HINPUT ERROR:  INPUT FILE READ IN FROM/
     +51HCHANNEL # 19 CONTAINS FEWER ITEMS THAN ITITIAL FILE)
    5 FORMAT(1X,49HINPUT ERROR:  INDEXING IN INPUT FILE READ IN FROM/
     +46HCHANNEL # 19 IS INCONSISTENT WITH INITIAL FILE)
C
C
      DO 210 IXXX1=1,MXI
        READ(19,1) XXCOL1,I,(MTBMI(I,K1),K1=1,4),FPR(I),RIP(I),IPCF(I),
     +    RTS(I),NRTS(I),COND(I),RMH(I),BCMH(I),BMH(I),DMH(I),RL(I)
        WEAR(I)=COND(I)
        IF(XXCOL1.NE.XXSTAR) GO TO 200
        NERRXX=NERRXX+1
```

```
        WRITE(6, 4)
        IF(PRNTXX.NE.0) WRITE(7, 4)
        RETURN
  200   CONTINUE
        IF(I      .EQ.INO   (IXXX1))GO TO 210
        NERRXX=NERRXX+1
        WRITE(6, 5)
        IF(PRNTXX.NE.0) WRITE(7, 5)
  210 CONTINUE
C
      READ(19, 2) XXCOL1
      IF(XXCOL1.EQ.XXSTAR) RETURN
      NERRXX=NERRXX+1
      WRITE(6, 3)
      IF(PRNTXX.NE.0) WRITE(7, 3)
C
      RETURN
      END
```

```
      SUBROUTINE READ9B
C                                                                    810625 084621195
C*********************************************************************************
C*  ATU MOD LCR                                                                  *
C*  READS THE ITEM MAINTENANCE DATA FILE PART 2                                  *
C*  FROM CHANNEL 22                                                              *
C*********************************************************************************
C
      COMMON /DATAB/ DATAB(150)
      INTEGER DATAB
      COMMON /DATAD/ DATAD(150)
      INTEGER DATAD
      COMMON /I/ I
      COMMON /INO/ INO(150)
      COMMON /MXI/ MXI
      COMMON /TIME1/ TIME1(150)
      INTEGER TIME1
      COMMON /UCTDEV/ UCTDEV(150)
      COMMON /NERRXX/ NERRXX
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      DATA XXSTAR/1H*/
    1 FORMAT(A1,4(I3),F7.0)
    2 FORMAT(A1)
    3 FORMAT(/49H UNIT 22 ERROR:  END OF FILE CARD NOT FOUND AFTER/
     +17X,/7HMAXIMUM NUMBER OF CARDS WERE READ IN.)
    4 FORMAT(1X,/7HINPUT ERROR:  INPUT FILE READ IN FROM/
     +51HCHANNEL # 22 CONTAINS FEWER ITEMS THAN ITITIAL FILE)
    5 FORMAT(1X,49HINPUT ERROR:  INDEXING IN INPUT FILE READ IN FROM/
     +46HCHANNEL # 22 IS INCONSISTENT WITH INITIAL FILE)
C
C
      DO 210 IXXX1=1,MXI
        READ 22, 1 (XXCOL1,I,DATAD(I),DATAB(I),TIME1(I),UCTDEV(I)
        IF(XXCOL1.NE.XXSTAR) GO TO 200
        NERRXX=NERRXX+1
        WRITE(6, 4)
        IF(PRNTXX.NE.0) WRITE(7, 4)
        RETURN
  200   CONTINUE
        IF(I.EQ.INO(IXXX1))GO TO 210
        NERRXX=NERRXX+1
        WRITE(6, 5)
        IF(PRNTXX.NE.0) WRITE(7, 5)
  210 CONTINUE
C
      READ(22, 1) XXCOL1
```

```
      IF(XXCOL1.EQ.XXSTAR) RETURN
      NERRXX=NERRXX+1
      WRITE(6, 3)
      IF(PRNTXX.NE.0) WRITE(7, 3)
C
      RETURN
      END
```

```
      SUBROUTINE READ10                                          810625 084631402
C
C*****************************************************************************
C*                                                                           *
C*  ATC MOD LCR                                                              *
C*  READS THE ITEM-SUPPORT EQUIPMENT                                         *
C*  CROSS-REFERENCE DATA FILE FROM CHANNEL 20                                *
C*                                                                           *
C*****************************************************************************
C
      COMMON /A/ A(150,4,3)
      INTEGER A
      COMMON /I/ I
      COMMON /IN0/ IN0(150)
      COMMON /IRMIN/ IRMIN(150,4)
      COMMON /MXI/ MXI
      COMMON /NJA/ NJA(150,4)
      COMMON /NRM/ NRM(150)
      COMMON /QSA/ QSA(150,4,3)
      COMMON /NERRXX/ NERRXX
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      DATA XXSTAR/1H*/
    1 FORMAT(A1,I3,2I2,I3,3(I4,F3.0))
    2 FORMAT(A1)
    3 FORMAT(/,49H UNIT 20 ERROR:  END OF FILE CARD NOT FOUND AFTER/
     +17X,37HMAXIMUM NUMBER OF CARDS WERE READ IN.)
    4 FORMAT(1X,37HINPUT ERROR:  INPUT FILE READ IN FROM/
     +5)HCHANNEL # 20 CONTAINS FEWER ITEMS THAN ITITIAL FILE)
    5 FORMAT(1X,49HINPUT ERROR:  INDEXING IN INPUT FILE READ IN FROM/
     +46HCHANNEL # 20 IS INCONSISTENT WITH INITIAL FILE)
C
C
      DO 220 IXXX1=1,MXI
        READ(20, 1) XXCOL1,I,NRM(I),IRMIN(I,1),NJA(I,1),(A(I,1,K2),
     +    QSA(I,1,K2),K2=1,3)
        IF(XXCOL1.NE.XXSTAR) GO TO 200
        NERRXX=NERRXX+1
        WRITE(6, 4)
        IF(PRNTXX.NE.0) WRITE(7, 4)
        RETURN
  200   CONTINUE
        IF(I      .EQ.IN0    (IXXX1))GO TO 205
        NERRXX=NERRXX+1
        WRITE(6, 5)
        IF(PRNTXX.NE.0) WRITE(7, 5)
C
C.....IF(NJA(I,RITEMP).GT.9)
C.....  ITER=(NJA(I,1)-1)/9;
```

```
C.......  DO 205 K2TEMP=1,ITER
C.......     K3=MINO(K2+9,30);
C.......     K4=K2+1;
C.......     READ(20,6)(A(I,1,K2),QSA(I,1,K2),K2=K4,K3)
C.......  6  FORMAT(11X,9(I4,F3.0))
  205  CONTINUE
        IF(.NOT.(NRM(I).GT.1)) GO TO 210
          INRM=NRM(I)
C
      DO 215 K1TEMP=2,INRM
        READ(20,7)IRMIN(I,K1TEMP),NJA(I,K1TEMP),
     +(A(I,K1TEMP,K2),QSA(I,K1TEMP,K2),K2=1,3)
    7 FORMAT(6X,I2,I3,3(I4,F3.0))
C.........     IF (.NOT.(NJA(I,K1TEMP).GT.9)) GO TO 214
C.........       ITER=(NJA(I,K1TEMP)-1)/9
C.........       DO 212 K2TEMP=1,ITER
C.........         K3=MINO(K2+9,30)
C.........         K4=K2+1
C.........         READ(20,8) (A(I,K1TEMP,K2),
C.........   +     QSA(I,K1TEMP,K2),K2=K4,K3)
C.........  8     FORMAT(11X,9(I4,F3.0))
C.........212     CONTINUE
C.........214  CONTINUE
  215  CONTINUE
  210   CONTINUE
  220 CONTINUE
C
      READ(20, 2) XXCOL1
      IF(XXCOL1.EQ.XXSTAR) RETURN
      NERRXX=NERRXX+1
      WRITE(6, 3)
      IF(PRNTXX.NE.0) WRITE(7, 3)
C
      RETURN
      END
```

```
      SUBROUTINE READ11
C                                                          810625 084645796
C*****************************************************************************
C*  BASELINE CHANGE                                                          *
C*  READS THE ITEM CONFIGURATION DATA                                        *
C*  FILE FROM CHANNEL 21                                                     *
C*****************************************************************************
C
      COMMON /I/ I
      COMMON /INO/ INO(150)
      COMMON /MXI/ MXI
      COMMON /NITEM/ NITEM(150,5)
      REAL NITEM
      COMMON /NP/ NP
      COMMON /NERRXX/ NERRXX
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      DATA XXSTAR/1H*/
    1 FORMAT(A1,I3,10F4.2)
    2 FORMAT(A1)
    3 FORMAT(/49H UNIT 21 ERROR:  END OF FILE CARD NOT FOUND AFTER/
     +17X,37HMAXIMUM NUMBER OF CARDS WERE READ IN.)
    4 FORMAT(1X,37HINPUT ERROR:  INPUT FILE READ IN FROM/
     +51HCHANNEL # 21 CONTAINS FEWER ITEMS THAN ITITIAL FILE)
    5 FORMAT(1X,49HINPUT ERROR:  INDEXING IN INPUT FILE READ IN FROM/
     +46HCHANNEL # 21 IS INCONSISTENT WITH INITIAL FILE)
C
C
      DO 210 IXXX1=1,MXI
        READ(21, 1) XXCOL1,I,(NITEM(I,NP),NP=1,5)
        IF(XXCOL1.NE.XXSTAR) GO TO 200
        NERRXX=NERRXX+1
        WRITE(6, 4)
        IF(PRNTXX.NE.0) WRITE(7, 4)
        RETURN
  200   CONTINUE
        IF(I      .EQ.INO    (IXXX1))GO TO 210
        NERRXX=NERRXX+1
        WRITE(6, 5)
        IF(PRNTXX.NE.0) WRITE(7, 5)
  210 CONTINUE
C
      READ(21, 2) XXCOL1
      IF(XXCOL1.EQ.XXSTAR) RETURN
      NERRXX=NERRXX+1
      WRITE(6, 3)
      IF(PRNTXX.NE.0) WRITE(7, 3)
```

```
C
      RETURN
      END
```

```
      SUBROUTINE INITAX
C                                                                  810625 084647151
C*****************************************************************************
C*  ATU MODS                                                                 *
C*  INITIALIZATION OF MODEL PARAMETERS                                       *
C*****************************************************************************
C
      COMMON /AFC/ AFC
      COMMON /AFMC/ AFMC
      COMMON /BAFC/ BAFC(6)
      COMMON /BIIMC/ BIIMC(6)
      COMMON /BISC/ BISC(6)
      COMMON /BMTRC/ BMTRC
      COMMON /BOFMC/ BOFMC(6)
      COMMON /BOLC/ BOLC(6)
      COMMON /BONMC/ BONMC(6)
      COMMON /BRSC/ BRSC(6)
      COMMON /BS/ BS(150)
      COMMON /BSECC/ BSECC(6)
      COMMON /BSECP/ BSECP(6)
      COMMON /BTCDI/ BTCDI
      COMMON /BXTRC/ BXTRC
      COMMON /DMTRC/ DMTRC
      COMMON /ERHAB/ ERHAB(120,10)
      COMMON /ERHAD/ ERHAD(120)
      COMMON /ERHD/ ERHD(150)
      COMMON /FAIL/ FAIL(150,10)
      COMMON /FPLT/ FPLT(150)
      COMMON /FPM/ FPM(150)
      COMMON /I/ I
      COMMON /IIMCA/ IIMCA(150)
      REAL IIMCA
      COMMON /IIMCB/ IIMCB
      REAL IIMCB
      COMMON /IIMCD/ IIMCD
      REAL IIMCD
      COMMON /IIMCI/ IIMCI
      REAL IIMCI
      COMMON /IIMCR/ IIMCR
      REAL IIMCR
      COMMON /IMTRC/ IMTRC
      REAL IMTRC
      COMMON /INO/ INO(150)
      COMMON /ISCB/ ISCB
      REAL ISCB
      COMMON /ISCD/ ISCD
      REAL ISCD
```

```
      COMMON /ISET/ ISET(120,10)
      REAL ISET
      COMMON /ISETD/ ISETD(120)
      REAL ISETD
      COMMON /L/ L
      COMMON /MTRC/ MTRC
      REAL MTRC
      COMMON /MTRCI/ MTRCI(150)
      REAL MTRCI
      COMMON /MXI/ MXI
      COMMON /MXL/ MXL
      COMMON /MXNS/ MXNS
      COMMON /NFD/ NFD(150)
      REAL NFD
      COMMON /NS/ NS
      COMMON /OFMCA/ OFMCA(150)
      COMMON /OFMCB/ OFMCB
      COMMON /OFMCD/ OFMCD
      COMMON /OLCP/ OLCP
      COMMON /OLCT/ OLCT
      COMMON /ONMC/ ONMC
      COMMON /ONMCA/ ONMCA(150)
      COMMON /RSC/ RSC
      COMMON /SECBC/ SECBC
      COMMON /SECBP/ SECBP
      COMMON /SECC/ SECC
      COMMON /SECDC/ SECDC
      COMMON /SECDP/ SECDP
      COMMON /SECIC/ SECIC
      COMMON /SECII/ SECII
      COMMON /SECIP/ SECIP
      COMMON /SECP/ SECP
      COMMON /SECR/ SECR
      COMMON /SECRC/ SECRC
      COMMON /SECRP/ SECRP
      COMMON /SEDC/ SEDC
      COMMON /SEINO/ SEINO(120)
      INTEGER SEINO
      COMMON /SEPC/ SEPC
      COMMON /SETDC/ SETDC(120)
      COMMON /STDC/ STDC
      COMMON /STDCI/ STDCI
      COMMON /STDCR/ STDCR
      COMMON /TDC/ TDC(150)
      COMMON /TERHB/ TERHB(120)
      COMMON /TERHD/ TERHD(120)
      COMMON /TERMH/ TERMH
```

```
      COMMON /TERMI/ TERMI
      COMMON /TIAC/ TIAC(150)
      COMMON /TUCTDC/ TUCTDC
      COMMON /USE/ USE(120,10)
      COMMON /USED/ USED(120)
      COMMON /XITEMQ/ XITEMQ(150)
C
C
      DO 220 IXXX1=1,MXL
        L=SEINO(IXXX1)
        TERHB(L)=0.
        TERHD(L)=0.
        SETDC(L)=0.
        ERHAD(L)=0.
        ISETD(L)=0.
        USED(L)=1.
        DO 210 NS=1,MXNS
          ERHAB(L,NS)=0.
          ISET(L,NS)=0.
          USE(L,NS)=1.
  210   CONTINUE
  220 CONTINUE
      DO 240 IXXX1=1,MXI
        I=INO(IXXX1)
        NFD(I)=0.
        ERHD(I)=0.
        XITEMQ(I)=0.
        BS(I)=0.
        TIAC(I)=0.
        TDC(I)=0.
        FPM(I)=0.
        MTRCI(I)=0.
        FPLT(I)=0.
        ONMCA(I)=0.
        OFMCA(I)=0.
        IIMCA(I)=0.
        DO 230 NS=1,MXNS
          FAIL(I,NS)=0.
  230   CONTINUE
  240 CONTINUE
      TERMH=0.
      TERMI=0.
      ISCB=0.
      ISCD=0.
      RSC=0.
      ONMC=0.
      OFMCB=0.
```

```
OFMCD=0.
SEPC=0.
SEDC=0.
TUCTDC=0.
SECII=0.
SECR=0.
IIMCB=0.
IIMCD=0.
IIMCI=0.
IIMCR=0.
OLCP=0.
OLCT=0.
AFC=0.
BSECC(1)=0.
BSECC(2)=0.
BSECC(3)=0.
BSECC(4)=0.
BSECC(5)=0.
BSECC(6)=0.
BSECP(1)=0.
BSECP(2)=0.
BSECP(3)=0.
BSECP(4)=0.
BSECP(5)=0.
BSECP(6)=0.
BOLC(1)=0.
BOLC(2)=0.
BOLC(3)=0.
BOLC(4)=0.
BOLC(5)=0.
BOLC(6)=0.
BAFC(1)=0.
BAFC(2)=0.
BAFC(3)=0.
BAFC(4)=0.
BAFC(5)=0.
BAFC(6)=0.
BISC(1)=0.
BISC(2)=0.
BISC(3)=0.
BISC(4)=0.
BISC(5)=0.
BISC(6)=0.
BRSC(1)=0.
BRSC(2)=0.
BRSC(3)=0.
BRSC(4)=0.
```

```
      BRSC(5)=0.
      BRSC(6)=0.
      BONMC(1)=0.
      BONMC(2)=0.
      BONMC(3)=0.
      BONMC(4)=0.
      BONMC(5)=0.
      BONMC(6)=0.
      BOFMC(1)=0.
      BOFMC(2)=0.
      BOFMC(3)=0.
      BOFMC(4)=0.
      BOFMC(5)=0.
      BOFMC(6)=0.
      BIIMC(1)=0.
      BIIMC(2)=0.
      BIIMC(3)=0.
      BIIMC(4)=0.
      BIIMC(5)=0.
      BIIMC(6)=0.
      AFMC=0.
      BMTRC=0.
      BTCDI=0.
      BXTRC=0.
      DMTRC=0.
      IMTRC=0.
      MTRC=0.
      SECBC=0.
      SECBP=0.
      SECC=0.
      SECDC=0.
      SECDP=0.
      SECIC=0.
      SECIP=0.
      SECP=0.
      SECRC=0.
      SECRP=0.
      STDC=0.
      STDCI=0.
      STDCR=0.
C
      RETURN
      END
```

```
      SUBROUTINE ERRCK1
C                                                                  810625 084734295
C*****************************************************************************
C*  PERFORM ERROR CHECKING ON INPUT DATA FILES                               *
C*****************************************************************************
C
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      COMMON /COND/ COND(150)
      COMMON /I/ I
      COMMON /INO/ INO(150)
      COMMON /LE/ LE(5)
      COMMON /LRU/ LRU(150)
      COMMON /M/ M
      COMMON /MTBMI/ MTBMI(150,4)
      REAL MTBMI
      COMMON /MXI/ MXI
      COMMON /MXM/ MXM
      COMMON /MXNP/ MXNP
      COMMON /NERRYY/ NERRYY
      COMMON /NHI/ NHI(150)
      COMMON /NITEM/ NITEM(150,5)
      REAL NITEM
      COMMON /NJA/ NJA(150,4)
      COMMON /NP/ NP
      COMMON /NRTS/ NRTS(150)
      REAL NRTS
      COMMON /RTS/ RTS(150)
    1 FORMAT(/5X,49HINPUT ERROR: RTS + NRTS + COND ¬= 1 FOR ITEM TYPE,I5
     +)
    2 FORMAT(/5X,70HINPUT ERROR: INDENTURE LEVEL INDICATORS (LRU & NHI)
     +NOT CONSISTENT FOR/7X,9HITEM TYPE,I5)
    3 FORMAT(/5X,70HINPUT ERROR: INDENTURE LEVEL INDICATORS (LRU & NHI)
     +NOT CONSISTENT FOR/7X,9HITEM TYPE,I5)
    4 FORMAT(/5X,47HINPUT ERROR: MTBMI CANNOT BE ZERO FOR ITEM TYPE,I5/7
     +X,25H IN OPERATING ENVIRONMENT,I5)
    5 FORMAT(/5X,17HINPUT ERROR: NJA(,I3,1H,,I1,27H) CANNOT BE GREATER T
     +HAN 3.)
C
C
C
      DO 310 IXXX1=1,MXI
        I=INO(IXXX1)
        CK1=RTS(I)+NRTS(I)+COND(I)
        IF(.NOT.(CK1.GT.1.000001.OR.CK1.LT..999999)) GO TO 210
          NERRYY=NERRYY+1
          IF(PRNTXX.NE.0) WRITE( 7, 1) I
```

```
        IF(PRNTXX.NE.1) WRITE(06, 1) I
  210   CONTINUE
        IF(.NOT.(LRU(I).EQ.1)) GO TO 230
          IF(.NOT.(NHI(I).NE.0)) GO TO 220
            NERRYY=NERRYY+1
            IF(PRNTXX.NE.0) WRITE( 7, 2) I
            IF(PRNTXX.NE.1) WRITE(06, 2) I
  220       CONTINUE
  230   CONTINUE
        IF(.NOT.(LRU(I).NE.1)) GO TO 250
          IF(.NOT.(NHI(I).EQ.0)) GO TO 240
            NERRYY=NERRYY+1
            IF(PRNTXX.NE.0) WRITE( 7, 3) I
            IF(PRNTXX.NE.1) WRITE(06, 3) I
  240       CONTINUE
  250   CONTINUE
        DO 280 NP=1,MXNP
          IF(.NOT.(NITEM(I,NP).GT.0)) GO TO 270
            IF(.NOT.(MTBMI(I,LE(NP)).EQ.0)) GO TO 260
              NERRYY=NERRYY+1
              IF(PRNTXX.NE.0) WRITE( 7, 4) I,LE(NP)
              IF(PRNTXX.NE.1) WRITE(06, 4) I,LE(NP)
  260         CONTINUE
  270       CONTINUE
  280   CONTINUE
        DO 300 M=1,MXM
          IF(.NOT.(NJA(I,M).GT.3)) GO TO 290
            NERRYY=NERRYY+1
            IF(PRNTXX.NE.0) WRITE( 7, 5) I,M
            IF(PRNTXX.NE.1) WRITE(06, 5) I,M
  290       CONTINUE
  300   CONTINUE
  310 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE RLCOMP
C                                                                  810625 084742553
C*****************************************************************************
C*  BASELINE CHANGE                                                          *
C*  ATU MOD FOR FLOAT                                                        *
C*  SETS VALUES FOR RTS, NRTS, COND                                          *
C*  DEPENDING ON THE VALUE OF RL(I)                                          *
C*****************************************************************************
C
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      COMMON /BIRD/ BIRD
      COMMON /COND/ COND(150)
      COMMON /I/ I
      COMMON /INO/ INO(150)
      COMMON /LRU/ LRU(150)
      COMMON /MXI/ MXI
      COMMON /NRTS/ NRTS(150)
      REAL NRTS
      COMMON /R/ R
      INTEGER R
      COMMON /RL/ RL(150)
      INTEGER RL
      COMMON /RTS/ RTS(150)
      COMMON /WEAR/ WEAR(150)
C
C
C
      DO 360 IXXX1=1,MXI
        I=INO(IXXX1)
        IF(.NOT.(R.EQ.1)) GO TO 210
          RL(I)=1
  210   CONTINUE
        IF(.NOT.(R.EQ.2)) GO TO 240
          IF(.NOT.(LRU(I).EQ.1)) GO TO 220
            RL(I)=1
  220     CONTINUE
          IF(.NOT.(LRU(I).NE.1)) GO TO 230
            RL(I)=2
  230     CONTINUE
  240   CONTINUE
        IF(.NOT.(R.EQ.3)) GO TO 270
          IF(.NOT.(LRU(I).EQ.1)) GO TO 250
            RL(I)=1
  250     CONTINUE
          IF(.NOT.(LRU(I).NE.1)) GO TO 260
            RL(I)=3
```

```
  260      CONTINUE
  270    CONTINUE
         IF(.NOT.(R.EQ.4)) GO TO 280
           RL(I)=2
  280    CONTINUE
         IF(.NOT.(R.EQ.5)) GO TO 310
           IF(.NOT.(LRU(I).EQ.1)) GO TO 290
             RL(I)=2
  290      CONTINUE
           IF(.NOT.(LRU(I).NE.1)) GO TO 300
             RL(I)=3
  300      CONTINUE
  310    CONTINUE
         IF(.NOT.(R.EQ.6)) GO TO 320
           RL(I)=3
  320    CONTINUE
         IF(.NOT.(RL(I).EQ.1)) GO TO 330
           COND(I)=WEAR(I)
           RTS(I)=(1.-COND(I))/(1.+BIRD)
           NRTS(I)=RTS(I)*BIRD
  330    CONTINUE
         IF(.NOT.(RL(I).EQ.2)) GO TO 340
           COND(I)=WEAR(I)
           RTS(I)=0.
           NRTS(I)=1-COND(I)
  340    CONTINUE
         IF(.NOT.(RL(I).EQ.3)) GO TO 350
           COND(I)=1.
           RTS(I)=0.
           NRTS(I)=0.
  350    CONTINUE
  360  CONTINUE
C
       RETURN
       END
```

```
      SUBROUTINE OTABST
C                                                                    810625 084750507
C*********************************************************************************
C*  PRINTS SUMMARY TITLE PAGE                                                    *
C*  ATU MOD LCK - 13 AUG 80                                                      *
C*********************************************************************************
C
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      COMMON /FULLXX/ FULLXX
      INTEGER FULLXX
      COMMON /FINC/ FINC
      COMMON /PIUP/ PIUP
      COMMON /R/ R
      INTEGER R
      COMMON /XFPR/ XFPR
      COMMON /XFR/ XFR
      COMMON /XMIL/ XMIL
      COMMON /XUC/ XUC
    1 FORMAT(1H1 ////////////////44X,44(1H*)/44X,1H*,42X,1H*)
    2 FORMAT(44X,1H*,5X,21HSYSTEM OPERATING LIFE,1X,F5.2,1X,5HYEARS,4X,1
     +H*/44X,1H*,42X,1H*/44X,1H*,42X,1H*)
    3 FORMAT(44X,1H*,5X,21HREPAIR LEVEL CASE RUN,2X,I3,11X,1H*/44X,1H*,4
     +2X,1H*/44X,1H*,42X,1H*)
    4 FORMAT(44X,1H*,5X,30HSENSITIVITY MULTIPLIER FACTORS,7X,1H*/44X,1H*
     +,42X,1H*)
    5 FORMAT(44X,1H*,9X,3HXUC,1X,F14.3,15X,1H*)
    6 FORMAT(44X,1H*,9X,3HXFR,1X,F14.3,15X,1H*)
    7 FORMAT(44X,1H*,9X,4HXFPR,F14.3,15X,1H*)
    8 FORMAT(44X,1H*,9X,4HXMIL,F14.3,15X,1H*)
    9 FORMAT(44X,1H*,9X,4HFINC,F14.3,15X,1H*/44X,1H*,42X,1H*/44X,44(1H*)
     +)
C
C
C
C.....ONLY PRINT THIS TABLE IF FULL OFF-LINE OUTPUT WAS REQUESTED
      IF(PRNTXX.EQ.0.OR.FULLXX.EQ.0) RETURN
C
      WRITE( 7, 1)
      WRITE( 7, 2) PIUP
      WRITE( 7, 3) R
      WRITE( 7, 4)
      WRITE( 7, 5) XUC
      WRITE( 7, 6) XFR
      WRITE( 7, 7) XFPR
      WRITE( 7, 8) XMIL
      WRITE( 7, 9) FINC
```

```
C
      RETURN
      END
```

```
      SUBROUTINE ITAB1A
C                                                              810625 084753916
C*****************************************************************************
C*  PRINTS THE SYSTEM-WIDE SCALAR PARAMETERS                                 *
C*  READ IN FROM THE MISC. DATA FILE :PART 1                                 *
C*****************************************************************************
C
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      COMMON /FULLXX/ FULLXX
      INTEGER FULLXX
      COMMON /BAA/ BAA
      COMMON /BLR/ BLR
      COMMON /BMF/ BMF
      COMMON /DAA/ DAA
      COMMON /DLR/ DLR
      COMMON /DMF/ DMF
      COMMON /HPD2/ HPD2
      INTEGER HPD2
      COMMON /MILR/ MILR(3)
      REAL MILR
      COMMON /MRF/ MRF
      REAL MRF
      COMMON /MRO/ MRO
      REAL MRO
      COMMON /PAL1/ PAL1
      COMMON /PAL2B/ PAL2B
      COMMON /PAL2D/ PAL2D
      COMMON /PMLR/ PMLR
      COMMON /SR/ SR
      COMMON /TNLR/ TNLR
      COMMON /TORB/ TORB
      COMMON /TORD/ TORD
      COMMON /TR/ TR
      COMMON /TRAVB/ TRAVB
      COMMON /TRAV1D/ TRAV1D
    1 FORMAT(1H1/44X,44HINPUT TABLE 1: SYSTEM-WIDE SCALAR PARAMETERS///)
    2 FORMAT(50X,30HGOVERNMENT-PROVIDED PARAMETERS/)
    3 FORMAT(26X,13HLABOR FACTORS/)
    4 FORMAT(29X,59H   BAA - MONTHLY AVAILABLE WORKING HOURS PER MAINTEN
     +ANCE   /38X,50HMAN AT BASE LEVEL                                  ,
     +F14.2 )
    5 FORMAT(29X,59H   BMF - BASE MAINTENANCE FACTOR
     +       ,F14.2 )
    6 FORMAT(29X,59H   DAA - MONTHLY AVAILABLE WORKING HOURS PER MAINTEN
     +ANCE   /38X,50HMAN AT DEPOT LEVEL                                 ,
     +F14.2 )
```

```
 7 FORMAT(29X,59H   DMF - DEPOT MAINTENANCE FACTOR
  +       ,F14.2 )
 8 FORMAT(29X,59H  HPD2 - NUMBER OF HOURS SPENT BY A TYPE 2
  +       /38X,50HTRAINEE IN CLASS PER DAY                    ,
  +I14    )
 9 FORMAT(29X,59H   MRO - AVERAGE MANHOURS PER FAILURE TO COMPLETE
  +       /38X,50HON-EQUIPMENT MAINTENANCE RECORDS            ,
  +F14.2 )
10 FORMAT(29X,59H   MRF - AVERAGE MANHOURS PER FAILURE TO COMPLETE
  +       /38X,50HOFF-EQUIPMENT MAINTENANCE RECORDS           ,
  +F14.2 )
11 FORMAT(29X,59H    SR - AVERAGE MANHOURS PER FAILURE TO COMPLETE
  +       /38X,50HSUPPLY TRANSACTION RECORDS                  ,
  +F14.2 )
12 FORMAT(29X,59H  TORB - TURNOVER RATE FOR BASE MAINT. PERSONNEL
  +       ,F14.2 )
13 FORMAT(29X,59H  TORD - TURNOVER RATE FOR DEPOT MAINT. PERSONNEL
  +       ,F14.2 )
14 FORMAT(29X,59H    TR - AVERAGE MANHOURS PER FAILURE TO COMPLETE
  +       /38X,50HTRANSPORTATION TRANSACTION FORMS            ,
  +F14.2 )
15 FORMAT(1X/26X,11HLABOR RATES/)
16 FORMAT(29X,59H   BLR - BASE MAINTENANCE LABOR RATE IN $ PER HOUR
  +       ,F14.2 )
17 FORMAT(29X,59H   DLR - DEPOT MAINTENANCE LABOR RATE IN $ PER HOUR
  +       ,F14.2 )
18 FORMAT(28X,55HMILR(1) - MOD/INSTALLATION LABOR RATE DURING PRODUCT
  +ION/38X,13HIN $ PER HOUR,37X,F14.2/28X,52HMILR(2) - MOD/INSTALLATI
  +ON LABOR RATE FOR FIELD MODS/38X,30HUSING DEPOT TEAM IN $ PER HOUR
  +,20X,F14.2/28X,56HMILR(3) - MOD/INSTALLATION LABOR RATE FOR MODS P
  +ERFORMED/38X,26HAT THE DEPOT IN $ PER HOUR,24X,F14.2)
19 FORMAT(29X,59H  PAL1 - AVERAGE DAILY PAY & ALLOWANCE FOR A
  +       /38X,50HTYPE 1 TRAINEE                              ,
  +F14.2 )
20 FORMAT(29X,59H PAL2B - AVERAGE DAILY PAY & ALLOWANCE FOR A
  +       /38X,50HTYPE 2 TRAINEE                              ,
  +F14.2 )
21 FORMAT(29X,59H PAL2D - AVERAGE DAILY PAY & ALLOWANCE FOR A
  +       /38X,50HTYPE 2 DEPOT TRAINEE                        ,
  +F14.2 )
22 FORMAT(29X,59H  PMLR - PRIME MISSION EQUIP OPER LABOR RATE IN $ PE
  +R HOUR ,F14.2 )
23 FORMAT(29X,59HTRAV1D - AVERAGE TRAVEL EXPENSE FOR TYPE 1 AND TYPE
  +2      /38X,50HDEPOT TRAINEES                              ,
  +F14.2 )
24 FORMAT(29X,59H TRAVB - AVERAGE TRAVEL EXPENSE FOR TYPE 2 BASE TRAI
  +NEES   ,F14.2 )
```

```
   25 FORMAT(29X,59H  TNLR - TIMING NET OPERATOR LABOR RATE IN $ PER HOU
     +R       ,F14.2 )
C
C
C
C.....ONLY PRINT THIS TABLE IF FULL OFF-LINE OUTPUT WAS REQUESTED
      IF(PRNTXX.EQ.0.OR.FULLXX.EQ.0) RETURN
C
      WRITE( 7, 1)
      WRITE( 7, 2)
      WRITE( 7, 3)
      WRITE( 7, 4) BAA
      WRITE( 7, 5) BMF
      WRITE( 7, 6) DAA
      WRITE( 7, 7) DMF
      WRITE( 7, 8) HPD2
      WRITE( 7, 9) MRO
      WRITE( 7,10) MRF
      WRITE( 7,11) SR
      WRITE( 7,12) TORB
      WRITE( 7,13) TORD
      WRITE( 7,14) TR
      WRITE( 7,15)
      WRITE( 7,16) BLR
      WRITE( 7,17) DLR
      WRITE( 7,18) (MILR(K1),K1=1,3)
      WRITE( 7,19) PAL1
      WRITE( 7,20) PAL2B
      WRITE( 7,21) PAL2D
      WRITE( 7,22) PMLR
      WRITE( 7,23) TRAV1D
      WRITE( 7,24) TRAVB
      WRITE( 7,25) TNLR
C
      RETURN
      END
```

```
      SUBROUTINE ITAB1B
C                                                          810625 084803848
C*****************************************************************************
C*  PRINTS THE SYSTEM-WIDE SCALAR PARAMETERS                                 *
C*  READ IN FROM THE MISC. DATA FILE : PART 2                                *
C*****************************************************************************
C
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      COMMON /FULLXX/ FULLXX
      INTEGER FULLXX
      COMMON /ACPP/ ACPP
      COMMON /BRCT/ BRCT
      COMMON /CFG/ CFG(3)
      COMMON /CPD2/ CPD2
      COMMON /CPPC/ CPPC
      COMMON /CPPD/ CPPD(3)
      COMMON /CRCT/ CRCT
      COMMON /DAD/ DAD
      COMMON /DRCT/ DRCT(3)
      COMMON /IMC/ IMC
      REAL IMC
      COMMON /OST/ OST(3)
      COMMON /OSTC/ OSTC
      COMMON /RCPP/ RCPP
      COMMON /RMC/ RMC
      COMMON /SA/ SA
      COMMON /UCPP/ UCPP
    1 FORMAT(1H1/44X,44HINPUT TABLE 1: SYSTEM-WIDE SCALAR PARAMETERS/61X
     +,11H(CONTINUED)//)
    2 FORMAT(1X/26X,14HPIPELINE TIMES/)
    3 FORMAT(29X,59H  BRCT - BASE REPAIR CYCLE TIME IN MONTHS
     +        ,F15.3 )
    4 FORMAT(29X,59H  CRCT - TIME FOR FAILURE AT SATELLITE BASE UNTIL RE
     +PAIR    /38X,50HAT CIMF BASE IN MONTHS                          ,
     +F15.3 )
    5 FORMAT(29X,59H   DAD - TIME FROM FAILURE REMOVAL AT DEPOT UNTIL RE
     +PAIR    /38X,50HAT DEPOT IN MONTHS                              ,
     +F15.3 )
    6 FORMAT(28X,54HDRCT(1) - TIME FROM FAILURE AT CONUS BASE UNTIL REPA
     +IR/38X,18HAT DEPOT IN MONTHS,32X,F15.3/28X,56HDRCT(2) - TIME FROM
     +FAILURE AT PACIFIC BASE UNTIL REPAIR/38X,18HAT DEPOT IN MONTHS,32X
     +,F15.3/28X,55HDRCT(3) - TIME FROM FAILURE AT EUROPE BASE UNTIL REP
     +AIR/38X,18HAT DEPOT IN MONTHS,32X,F15.3/28X,52H OST(1  - ORDER AND
     + SHIPPING TIME FROM CONUS BASE TO/38X,15HDEPOT IN MONTHS,35X,F15.3
     +/28X,54H OST(2) - ORDER AND SHIPPING TIME FROM PACIFIC BASE TO/38X
     +,15HDEPOT IN MONTHS,35X,F15.3/28X,53H OST(3) - ORDER AND SHIPPING
```

```
     +TIME FROM EUROPE BASE TO/38X,15HDEPOT IN MONTHS,35X,F15.3/28X,55H
     +  OSTC - ORDER AND SHIPPING TIME FROM A SATELLITE BASE/38X,26HTO I
     +TS CIMF BASE IN MONTHS,24X,F15.3/)
    7 FORMAT(26X,17HUNIT COST FACTORS/)
    8 FORMAT(29X,59H  ACPP - ACQUISTION COST PER PAGE FOR ORIGINAL
     +       /38X,50HNEGATIVES OF TECH. DATA                          ,
     +F15.3 )
    9 FORMAT(28X,53H CFG(1) - COST OF FUEL IN $ PER GALLON AT CONUS BASE
     +S,7X,F15.3/28X,55H CFG(2) - COST OF FUEL IN $ PER GALLON AT PACIFI
     +C BASES,5X,F15.3/28X,54H CFG(3) - COST OF FUEL IN $ PER GALLON AT
     +EUROPE BASES,6X,F15.3/28X,52H  CPD2 - COST PER CLASS PER DAY FOR
     +TYPE 2 TRAINING,8X,F15.3/28X,55H  CPPC - COST OF PACKING AND SHIP
     +PING FROM A SATELLITE/38X,47HBASE TO ITS CIMF BASE IN $ PER NET WE
     +IGHT POUND,3X,F15.3/28X,54HCPPD(1) - COST OF PACKING AND SHIPPING
     +FROM CONUS BASE/38X,34HTO DEPOT IN $ PER NET WEIGHT POUND,16X,F15.
     +3/28X,56HCPPD(2) - COST OF PACKING AND SHIPPING FROM PACIFIC BASE/
     +38X,34HTO DEPOT IN $ PER NET WEIGHT POUND,16X,F15.3/28X,55HCPPD(3)
     + - COST OF PACKING AND SHIPPING FROM EUROPE BASE/38X,34HTO DEPOT I
     +N $ PER NET WEIGHT POUND,16X,F15.3)
   10 FORMAT(29X,59H  RCPP - REPRODUCTION COST PER COPY PER PAGE OF
     +       /38X,50HTECH. DATA                                       ,
     +F15.3 )
   11 FORMAT(29X,59H   IMC - INITIAL DEPOT INVENTORY MANAGEMENT COST PER
     + NEW   /38X,50HPART IN $                                        ,
     +F15.3 )
   12 FORMAT(29X,59H   RMC - RECURRING DEPOT INVENTORY MANAGEMENT COST P
     +ER NEW /38X,50HPART IN $ PER YEAR                               ,
     +F15.3 )
   13 FORMAT(29X,59H    SA - BASE-LEVEL INVENTORY MANAGEMENT COST PER NE
     +W PART /38X,50HIN $ PER YEAR                                    ,
     +F15.3 )
   14 FORMAT(29X,59H  UCPP - UPKEEP COST PER YEAR PER DISTINCT PAGE OF
     +       /38X,50HTECH. DATA                                       ,
     +F15.3 )
C
C
C
C.....ONLY PRINT THIS TABLE IF FULL OFF-LINE OUTPUT WAS REQUESTED
      IF(PRNTXX.EQ.0.OR.FULLXX.EQ.0) RETURN
C
      WRITE( 7, 1)
      WRITE( 7, 2)
      WRITE( 7, 3) BRCT
      WRITE( 7, 4) CRCT
      WRITE( 7, 5) DAD
      WRITE( 7, 6) (DRCT(K2),K2=1,3),(OST(K3),K3=1,3),OSTC
      WRITE( 7, 7)
```

```
      WRITE( 7, 8) ACPP
      WRITE( 7, 9) (CFG(K4),K4=1,3),CPD2,CPPC,(CPPD(K5),K5=1,3)
      WRITE( 7,10) RCPP
      WRITE( 7,11) IMC
      WRITE( 7,12) RMC
      WRITE( 7,13) SA
      WRITE( 7,14) UCPP
C
      RETURN
      END
```

```
      SUBROUTINE ITAB1C
C                                                                  810625 084811109
C*****************************************************************************
C*  ATU MOD LCR                                                              *
C*  PRINTS THE SYSTEM-WIDE SCALAR PARAMETERS                                 *
C*  READ IN FROM THE MISC. DATA FILE : PART 3                                *
C*****************************************************************************
C
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      COMMON /FULLXX/ FULLXX
      INTEGER FULLXX
      COMMON /BDATA/ BDATA
      INTEGER BDATA
      COMMON /BF/ BF
      COMMON /BIRD/ BIRD
      COMMON /CPD1/ CPD1
      COMMON /DDATA/ DDATA
      INTEGER DDATA
      COMMON /FSEDC/ FSEDC
      COMMON /HPD1/ HPD1
      INTEGER HPD1
      COMMON /KFAC/ KFAC(4)
      REAL KFAC
      COMMON /MUSE/ MUSE
      REAL MUSE
      COMMON /NRUC/ NRUC
      REAL NRUC
      COMMON /PIUP/ PIUP
      COMMON /QTYP1/ QTYP1
      INTEGER QTYP1
      COMMON /QTYP2B/ QTYP2B
      INTEGER QTYP2B
      COMMON /QTYP2D/ QTYP2D
      INTEGER QTYP2D
      COMMON /R/ R
      INTEGER R
      COMMON /SPC1/ SPC1
      INTEGER SPC1
      COMMON /SPC2/ SPC2
      INTEGER SPC2
      COMMON /TEFM/ TEFM
      COMMON /TYP2TF/ TYP2TF
      COMMON /XFPR/ XFPR
      COMMON /XFR/ XFR
      COMMON /XMIL/ XMIL
      COMMON /XUC/ XUC
```

```
 1 FORMAT(1H1/44X,44HINPUT TABLE 1: SYSTEM-WIDE SCALAR PARAMETERS/61X
  +,11H(CONTINUED)///)
 2 FORMAT(1X/26X,21HMISCELLANEOUS FACTORS/)
 3 FORMAT(28X,41H     BF - COEFFICIENT IN SPARING FUNCTION,19X,F14.2)
 4 FORMAT(29X,59H  BIRD - FRACTION OF BASE-REPAIR-INTENDED FAILURES
  +       /38X,50HREQUIRING DEPOT REPAIR                          ,
  +F14.2 )
 5 FORMAT(28X,54HKFAC(1) - FAILURE RATE EXPERIENCE FACTOR FOR AIRBORN
  +E-/38X,19HFIGHTER ENVIRONMENT,31X,F14.2/28X,54HKFAC(2) - FAILURE R
  +ATE EXPERIENCE FACTOR FOR AIRBORNE-/38X,17HCARGO ENVIRONMENT,35X,F
  +14.2/28X,52HKFAC(3) - FAILURE RATE EXPERIENCE FACTOR FOR GROUND-/3
  +8X,31HFIXED/TRANSPORTABLE ENVIRONMENT,19X,F14.2/28X,52HKFAC(4) - F
  +AILURE RATE EXPERIENCE FACTOR FOR GROUND-/38X,18HMOBILE ENVIRONMEN
  +T,32X,F14.2)
 6 FORMAT(29X,59H  MUSE - MINIMUM FRACTIONAL UTILIZATION FOR SENSITIV
  +ITY     /38X,50HCALCULATIONS ON SUPPORT EQUIPMENT COSTS          ,
  +F14.2 )
 7 FORMAT(29X,59H  NRUC - NUMBER OF YEARS OF REPLACEMENT SPARES TO BE
  +       /38X,50HPROVIDED UNDER THE ATU PRODUCTION CONTRACT(S)    ,
  +F14.2 )
 8 FORMAT(29X,59H  PIUP - NUMBER OF SYSTEM OPERATING YEARS
  +       ,F14.2 )
 9 FORMAT(29X,59H QTYP1 - NUMBER OF TYPE 1 TRAINEES
  +       ,I14   )
10 FORMAT(29X,59HQTYP2B - NUMBER OF TYPE 2 BASE TRAINEES
  +       ,I14   )
11 FORMAT(29X,59HQTYP2D - NUMBER OF TYPE 2 DEPOT TRAINEES
  +       ,I14   )
12 FORMAT(29X,59H  SPC2 - MAXIMUM NUMBER OF TYPE 2 TRAINEES PER CLASS
  +       ,I14   )
13 FORMAT(29X,59HTYP2TF - RATIO OF TYPE 2 TRAINING TIME TO TYPE 1
  +       /38X,50HTRAINING TIME                                   ,
  +F14.2 )
14 FORMAT(29X,59H  XFPR - FALSE PULL RATE SENSITIVITY MUTIPLIER FACTO
  +R      ,F14.2 )
15 FORMAT(29X,59H   XFR - FAILURE RATE SENSITIVITY MULTIPLIER FACTOR
  +       ,F14.2 )
16 FORMAT(29X,59H  XMIL - MCD/LAL [illegible] SENSITIVITY MULTIPLIER FA
  +CTOR   ,F14.2 )
17 FORMAT(29X,59H   XUC - UNIT COST SENSITIVITY MULTIPLIER FACTOR
  +       ,F14.2 )
18 FORMAT(1H1/44X,44HINPUT TABLE 1: SYSTEM-WIDE SCALAR PARAMETERS/61X
  +,11H(CONTINUED)///)
19 FORMAT(1X,50X,34HCONTRACTOR - DETERMINED PARAMETERS//)
20 FORMAT(29X,59H BDATA - NUMBER OF TECH. DATA PAGES FOR BASE MAINT.
  +AND    /38X,50HNOT ITEM OR SE SPECIFIC                          ,
  +I14   )
```

```
   21 FORMAT(29X,59H  CPD1 - COST PER CLASS PER DAY FOR TYPE 1 TRAINING
     +        ,F14.2 )
   22 FORMAT(29X,59H DDATA - NUMBER OF TECH. DATA PAGES FOR DEPOT MAINT.
     +        /38X,50HAND NOT ITEM OR SE SPECIFIC                      ,
     +I14    )
   23 FORMAT(29X,59H FSEDC - TOTAL COST OF FULL SCALE ENGINEERING
     +        /38X,50HDEVELOPMENT PROGRAM                              ,
     +F14.2 )
   24 FORMAT(29X,59H  HPD1 - NUMBER OF CLASS HOURS PER DAY FOR A TYPE 1
     +        /38X,50HTRAINING CLASS                                   ,
     +I14    )
   25 FORMAT(29X,59H     R - REPAIR LEVEL CASE RUN NUMBER
     +        ,I14    )
   26 FORMAT(29X,59H  SPC1 - MAXIMUM NUMBER OF TYPE 1 TRAINEES PER CLASS
     +        ,I14    )
   27 FORMAT(29X,59H  TEFM - COST OF TRAINING EQUIPMENT, FACILITIES AND
     +        /38X,50HMANUALS                                          ,
     +F14.2 )
C
C
C
C.....ONLY PRINT THIS TABLE IF FULL OFF-LINE OUTPUT WAS REQUESTED
      IF(PRNTXX.EQ.0.OR.FULLXX.EQ.0) RETURN
C
      WRITE( 7, 1)
      WRITE( 7, 2)
      WRITE( 7, 3) BF
      WRITE( 7, 4) FIRD
      WRITE( 7, 5) (KFAC(K2),K2=1,4)
      WRITE( 7, 6) MFSE
      WRITE( 7, 7) NRUC
      WRITE( 7, 8) FIUP
      WRITE( 7, 9) /TYP1
      WRITE( 7,10) /TYP2B
      WRITE( 7,11) /TYP2D
      WRITE( 7,12) /P2
      WRITE( 7,13) TYP2TF
      WRITE( 7,14) NFPR
      WRITE( 7,15) NFR
      WRITE( 7,16) NMIL
      WRITE( 7,17) NUC
      WRITE( 7,18)
      WRITE( 7,19)
      WRITE( 7,20) DDATA
      WRITE( 7,21) CPD1
      WRITE( 7,22) DDATA
      WRITE( 7,23) FSEDC
```

```
      WRITE( 7,24) HPD1
      WRITE( 7,25) R
      WRITE( 7,26) SPC1
      WRITE( 7,27) TEFM
C
      RETURN
      END
```

```
      SUBROUTINE ITAB2
C                                                                  810625 084816178
C*****************************************************************************
C*  ATU MOD LCR                                                              *
C*  PRINTS BASE CONFIGURATION DATA                                           *
C*****************************************************************************
C
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      COMMON /FULLXX/ FULLXX
      INTEGER FULLXX
      COMMON /BNOUN/ BNOUN(10,16)
      COMMON /BPLAT/ BPLAT(10)
      INTEGER BPLAT
      COMMON /BSP/ BSP(10)
      INTEGER BSP
      COMMON /BTYPE/ BTYPE(10)
      INTEGER BTYPE
      COMMON /LO/ LO(10)
      COMMON /MXNS/ MXNS
      COMMON /NBC/ NBC(10)
      REAL NBC
      COMMON /NHB/ NHB(10)
      COMMON /NS/ NS
      COMMON /TNB/ TNB(10)
    1 FORMAT(1H1,28X,39HINPUT TABLE 2:  BASE CONFIGURATION DATA    58X,4
     +HNEXT,6X,3HNO.,5X,4HBASE,6X,4HBASE/2X,4HBASE,9X,4HBASE,10X,6HNO.,C
     +F,3X,7HLOC. OF,4X,4HBASE,4X,6HHIGHER,4X,5HUNDER,4X,5HPLAT-,3X,7HSU
     +PPORT/2X,5HINDEX,8X,4HNAME,10X,5HBASES,5X,4HBASE,6X,4HTYPE,5X,4HBA
     +SE,6X,4HCIME,4X,5HFORMS,2X,10HPHILOSOPHY 3X,4H(NS),7X,7H(BNOUN),8X
     +,5H(TNB),5X,4H(LO),5X,7H(BTYPE),3X,5H(NHB),4X,5H(NBC),3X,7H(BPLAT
     +,3X,5H(BSP)/)
    2 FORMAT(3X,I2,4X,16A1,4X,F4.0,7X,I2,8X,I2,7X,I2,6X,F4.1,6X,I2,8X,I2
     +)
C
C
C
C.....ONLY PRINT THIS TABLE IF FULL OFF-LINE OUTPUT WAS REQUESTED
      IF(PRNTXX.EQ.0.OR.FULLXX.EQ.0) RETURN
C
      WRITE( 7, 1)
      DO 210 NS=1,MXNS
        WRITE( 7, 2) NS,(BNOUN(NS,I1),I1=1,16),TNB(NS),LO(NS),BTYPE(NS),
     +    NHB(NS),NBC(NS),BPLAT(NS),BSP(NS)
  210 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE ITAB3
C                                                                  810625 084821760
C*****************************************************************************
C*  ATU MOD LCR                                                              *
C*  PRINTS PLATFORM OPERATION DATA FILE                                      *
C*****************************************************************************
C
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      COMMON /FULLXX/ FULLXX
      INTEGER FULLXX
      COMMON /AMPM/ AMPM(5,3)
      COMMON /APFH/ APFH(5,3)
      COMMON /FGH/ FGH(5)
      COMMON /LE/ LE(5)
      COMMON /M/ M
      COMMON /MMPD/ MMPD(5,3)
      REAL MMPD
      COMMON /MMPM/ MMPM(5)
      REAL MMPM
      COMMON /MXNP/ MXNP
      COMMON /NP/ NP
      COMMON /PNOUN/ PNOUN(5,12)
      COMMON /TFAC/ TFAC(5)
      COMMON /THRS/ THRS(5)
    1 FORMAT(1H1//44X,39HINPUT TABLE 3:  PLATFORM OPERATION DATA//2X,5HP
     +LAT-,16X,5HEN-,2X,20H*OPERATING HOURS IN*,6HUTILI-,1X,5HACTI-,1X,2
     +0H*MISSIONS PER MONTH*,4X,11HOTHER HOURS,4X,1H*,6HTHRUST,2X,7HGALL
     +ONS/2X,4HFORM,3X,8HPLATFORM,6X,6HVIRON*,18(1H-),7H*ZATION,1X,7HVAT
     +ION*,18(1H-),1H*,19(1H-),1H*,1X,2HIN,6X,3HPER/2X,5HINDEX,2X,12HNOM
     +ENCLATURE,2X,4HMENT,1X,20H*CONUS PACIF EUROPE*,6HFACTOR,1X,4HTIME,
     +2X,20H*CONUS PACIF EUROPE*,20H CONUS PACIF EUROPE*,6HPOUNDS,2X,7HO
     +PER HR 2X,4H(NP),4X,7H(PNOUN),6X,4H(LE),9X,6H(APFH),6X,6H(TFAC),1X
     +,6H(MMPM),8X,6H(AMPM),13X,6H(MMPD),8X,6H(THRS),3X,5H(FGH))
    2 FORMAT(2X,I3,3X,12A1,3X,I2,3X,F5.0,1X,F5.0,1X,F5.0,4X,F4.2,2X,F4.1
     +,3X,F5.1,1X,F5.1,1X,F5.1,1X,F6.1,1X,F6.1,1X,F6.1,1X,F6.0,1X,F6.0)
C
C
C
C.....ONLY PRINT THIS TABLE IF FULL OFF-LINE OUTPUT WAS REQUESTED
      IF(PRNTXX.EQ.0.OR.FULLXX.EQ.0) RETURN
C
      WRITE( 7, 1)
      DO 210 NP=1,MXNP
        WRITE( 7, 2) NP,(PNOUN(NP,K1),K1=1,12),LE(NP),(APFH(NP,M),M=1,
     +     3),TFAC(NP),MMPM(NP),(AMPM(NP,M),M=1,3),(MMPD(NP,M),M=1,3),
     +     THRS(NP),FGH(NP)
```

```
  210 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE ITAB4
C                                                                  810625 084824136
C*****************************************************************************
C*  ATU MOD LCR                                                              *
C*  PRINTS PLATFORM TERMINAL COST AND INITIAL                                *
C*  MOD/INSTALLATION DATA FILE                                               *
C*****************************************************************************
C
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      COMMON /FULLXX/ FULLXX
      INTEGER FULLXX
      COMMON /DRAG/ DRAG(5)
      COMMON /FR/ FR(3,5)
      COMMON /INTNR/ INTNR(5)
      REAL INTNR
      COMMON /INTR/ INTR(5)
      REAL INTR
      COMMON /K/ K(5)
      REAL K
      COMMON /M/ M
      COMMON /MXNP/ MXNP
      COMMON /NAE/ NAE(5)
      REAL NAE
      COMMON /NP/ NP
      COMMON /NRMI/ NRMI(5)
      REAL NRMI
      COMMON /NTRMP/ NTRMP(5)
      REAL NTRMP
      COMMON /PDIV/ PDIV(5)
    1 FORMAT(1H1/27X,76HINPUT TABLE 4:  PLATFORM TERMINAL DATA & NON-REC
     +URRING MOD/INSTALLATION DATA//43X,23HIN THOUSANDS OF DOLLARS///10X
     +,3HNO.,43X,5HPLAT-,21X,3HNO.,5X,4HLBS.,4X,6HTHRUST/2X,5HPLAT-,3X,3
     +HPME,7X,5HOTHER,32X,4HFORM,3X,18H*FRACTION MODS IN*,1X,5HADDED,3X,
     +4HDRAG,4X,5H-FUEL/2X,4HFORM,4X,4HTER-,6X,5HPROD.,5X,6HRECUR.,5X,10
     +HNON-RECUR.,4X,6HDIVER-,1X,1H*,16(1H-),1H*,1X,5HANTEN,3X,3HPER,5X,
     +6HCNSMPT/2X,5HINDEX,3X,6HMINALS,4X,5HCOSTS,6X,5HINTEG,6X,10HMOD/I
     +COST,4X,4HSITY,3X,18H*PROD FIELD DEPOT*,1X,3HNAS,5X,5HANTEN,3X,6HF
     +ACTOR/2X,4H(NP),4X,7H(NTRMP),3X,7H(INTNR),4X,6H(INTR),7X,6H(NRMI),
     +6X,6H(PDIV),8X,4H(FR),8X,5H(NAE),3X,6H(DRAG),3X,3H(K)/)
    2 FORMAT(2X,I3,5X,F5.2,3X,F10.3,1X,F9.3,2X,F10.3,5X,F5.2,3X,2(F4.2,2
     +X),F4.2,3X,F5.2,3X,F5.1,4X,F5.2)
C
C
C
C.....ONLY PRINT THIS TABLE IF FULL OFF-LINE OUTPUT WAS REQUESTED
      IF(PRNTXX.EQ.0.OR.FULLXX.EQ.0) RETURN
```

```
C
      WRITE( 7, 1)
      DO 210 NP=1,MXNP
        T1=INTNR(NP)/1000
        T2=INTR(NP)/1000
        T3=NRMI(NP)/1000
        WRITE( 7, 2) NP,NTRMP(NP),T1,T2,T3,PDIV(NP),(FR(M,NP),M=1,3),
     +    NAE(NP),DRAG(NP),K(NP)
  210 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE ITAB5
C                                                              810625 084830154
C*****************************************************************************
C*  PRINTS PLATFORM RECURRING MOD/INSTALLATION LABOR HOURS BY MODE AND *
C*  DATA FILE                                                         *
C*****************************************************************************
C
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      COMMON /FULLXX/ FULLXX
      INTEGER FULLXX
      COMMON /AKIT/ AKIT(4,5)
      COMMON /IA/ IA
      COMMON /M/ M
      COMMON /MIFIX/ MIFIX(3,5)
      REAL MIFIX
      COMMON /MIMH/ MIMH(4,3,5)
      REAL MIMH
      COMMON /MXNP/ MXNP
      COMMON /NP/ NP
    1 FORMAT(1H1,35X,56HINPUT TABLE 5:  PLATFORM RECURRING MOD/INSTALLAT
     +ION DATA///57X,1H*,13X,45HMOD/INSTALLATION LABOR HOURS BY MODE AND
     + AREA,12X,1H*/2X,5HPLAT-,2X,19H*FIXED MOD/I COST *,7X,15HAKIT EQUI
     +P COST,7X,1H*,70(1H-),1H*/2X,4HFORM,3X,1H*,17(1H-),1H*,2X,25(1H-),
     +2X,1H*,5X,12H**PROD MOD**,5X,1H*,5X,13H**FIELD MOD**,5X,1H*,6X,13H
     +**DEPOT MOD**,4X,1H*/2X,5HINDEX,2X,5H*PROD,1X,5HFIELD,1X,5HDEPOT,1
     +X,1H*,2X,5HANTNA,1X,6HELCBOX,1X,6HCNTLHD,1X,5HCABLE,2X,5H*ANTN,2X,
     +4HELBX,2X,4HCTLH,2X,10HCBL * ANTN,2X,4HELBX,2X,4HCTLH,2X,10HCBL *
     +ANTN,2X,4HELBX,2X,4HCTLH,2X,3HCBL,1X,1H*/2X,4H(NP),7X,8H(MIFIX)*,1
     +9X,6H(AKIT),44X,6H(MIMH)/)
    2 FORMAT(3X,I3,2X,7(F6.0,1X),12F6.0)
    3 FORMAT(//2X,25H* IN THOUSANDS OF DOLLARS)
C
C
C
C.....ONLY PRINT THIS TABLE IF FULL OFF-LINE OUTPUT WAS REQUESTED
      IF(PRNTXX.EQ.0.OR.FULLXX.EQ.0) RETURN
C
      WRITE( 7, 1)
      DO 210 NP=1,MXNP
        WRITE( 7, 2) NP,(MIFIX(M,NP),M=1,3),(AKIT(IA,NP),IA=1,4),
     +     ((MIMH(IA,M,NP),IA=1,4),M=1,3)
  210 CONTINUE
      WRITE( 7, 3)
C
      RETURN
      END
```

```
      SUBROUTINE ITAB6
C                                                          810625 084835801
C*****************************************************************************
C*  PRINTS PLATFORM DEPLOYMENT AT BASES                                      *
C*  DATA FILE                                                                *
C*****************************************************************************
C
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      COMMON /FULLXX/ FULLXX
      INTEGER FULLXX
      COMMON /MXNP/ MXNP
      COMMON /NP/ NP
      COMMON /NPLT/ NPLT(5,10)
      REAL NPLT
      COMMON /NS/ NS
    1 FORMAT(1H1,8X,58HINPUT TABLE 6:  PLATFORM DEPLOYMENT AT BASES - NP
     +LT(NP,NS)//1X,5HPLAT-/1X,4HFORM,3X,74HAVERAGE NUMBER OF PLATFORMS
     +OF GIVEN TYPE AT EACH BASE WITHIN GROUPS BELOW/1X,5HINDEX,2X,122(1
     +H-)/1X,4H(NP),16X,1H1,5X,1H2,5X,1H3,5X,1H4,5X,1H5,5X,1H6,5X,1H7,5X
     +,1H8,5X,1H9,4X,2H10,4X,2H11,4X,2H12,4X,2H13,4X,2H14,4X,2H15,4X,2H1
     +6/)
    2 FORMAT(1X,I3,14X,10(F5.2,1X))
C
C
C
C.....ONLY PRINT THIS TABLE IF FULL OFF-LINE OUTPUT WAS REQUESTED
      IF(PRNTXX.EQ.0.OR.FULLXX.EQ.0) RETURN
C
      WRITE( 7, 1)
      DO 210 NP=1,MXNP
        WRITE( 7, 2) NP,(NPLT(NP,NS),NS=1,10)
  210 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE ITAB7
C                                                                  810625 084840218
C*****************************************************************************
C*  ATU MOD LCR                                                              *
C*  PRINTS SUPPORT EQUIPMENT DATA                                            *
C*****************************************************************************
C
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      COMMON /FULLXX/ FULLXX
      INTEGER FULLXX
      COMMON /CSE/ CSE(120)
      COMMON /DATAS/ DATAS(120)
      INTEGER DATAS
      COMMON /L/ L
      COMMON /MSE/ MSE(120)
      REAL MSE
      COMMON /MXL/ MXL
      COMMON /SEDEV/ SEDEV(120)
      COMMON /SEINO/ SEINO(120)
      INTEGER SEINO
      COMMON /SENOUN/ SENOUN(120,20)
      COMMON /SENUM/ SENUM(120,12)
      COMMON /SETYPE/ SETYPE(120)
      INTEGER SETYPE
    1 FORMAT(1H1,44X,38HINPUT TABLE 7:  SUPPORT EQUIPMENT DATA///58X,8HF
     +RACTION,5X,14HCOM.ON-SITE(1),4X,9HNUMBER OF,5X,2HSE/3X,2HSE,42X,7H
     +SE UNIT,4X,9HUNIT COST,4X,14HCOM.PROCUR.(2),4X,10HTECH ORDER,2X,6H
     +DEVMNT/2X,5HINDEX,4X,15HSE NOMENCLATURE,7X,11HSE PART NO.,5X,4HCOS
     +T,4X,11HTO MAINTAIN,3X,11HPECULIAR(3),8X,5HPAGES,8X,4HCOST/3X,3H(L
     +),9X,8H(SENOUN),11X,7H(SENUM),7X,5H(CSE),7X,5H(MSE),7X,8H(SETYPE),
     +9X,7H(DATAS),5X,7H(SEDEV)/)
    2 FORMAT(3X,I3,3X,20A1,1X,12A1,4X,F7.0,7X,F5.3,10X,I2,14X,I3,4X,F8.0
     +)
C
C
C
C.....ONLY PRINT THIS TABLE IF FULL OFF-LINE OUTPUT WAS REQUESTED
      IF(PRNTXX.EQ.0.OR.FULLXX.EQ.0) RETURN
C
      WRITE( 7, 1)
      DO 210 IXXX1=1,MXL
        L=SEINO(IXXX1)
        WRITE( 7, 2) L,(SENOUN(L,I1),I1=1,20),(SENUM(L,I2),I2=1,12),
     +    CSE(L),MSE(L),SETYPE(L),DATAS(L),SEDEV(L)
  210 CONTINUE
C
```

```
      RETURN
      END
```

```
      SUBROUTINE ITAB8
C                                                                  810625 084851139
C*****************************************************************************
C*  ATU MOD LCR                                                              *
C*  PRINTS ITEM EQUIPMENT DATA                                               *
C*****************************************************************************
C
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      COMMON /FULLXX/ FULLXX
      INTEGER FULLXX
      COMMON /GFE/ GFE(150)
      INTEGER GFE
      COMMON /I/ I
      COMMON /INO/ INO(150)
      COMMON /INOUN/ INOUN(150,24)
      REAL INOUN
      COMMON /INTEG/ INTEG(150)
      REAL INTEG
      COMMON /LFAC/ LFAC(150)
      REAL LFAC
      COMMON /LRU/ LRU(150)
      COMMON /MXI/ MXI
      COMMON /NHI/ NHI(150)
      COMMON /PA/ PA(150)
      COMMON /PTNUM/ PTNUM(150,12)
      COMMON /RM/ RM(150)
      COMMON /UP/ UP(150)
      COMMON /WT/ WT(150)
    1 FORMAT(1H1/48X,36HINPUT TABLE 8A:  ITEM EQUIPMENT DATA)
    2 FORMAT(61X,11H(CONTINUED))
    3 FORMAT(//62X,6HLRU(1),3X,4HNEXT,5X,3HGFE,5X,5HINTE-,5X,4HITEM,5X,6
     +HREPAIR,14X,5HPIECE/2X,4HITEM,47X,5HLEARN,6X,2HOR,4X,6HHIGHER,4X,5
     +HINDI-,3X,7HGRATION,3X,4HUNIT,4X,9HMATERIALS,4X,4HITEM,4X,4HPART/2
     +X,5HINDEX,9X,12HNOMENCLATURE,9X,11HPART NUMBER,6X,4HRATE,4X,6HSRU(
     +0),3X,4HITEM,5X,5HCATOR,5X,5HITEMS,4X,4HCOST,5X,6HFACTOR,5X,6HWEIG
     +HT,2X,5HCOUNT /3X,3H(I),12X,7H(INOUN),14X,7H(PTNUM),7X,6H(LFAC),3X
     +,5H(LRU),4X,5H(NHI),4X,5H(GFE),3X,7H(INTEG),3X,4H(UP),6X,4H(RM),7X
     +,4H(WT),4X,4H(PA)/)
    4 FORMAT(4X,I3,3X,24A1,1X,12A1,6X,F4.2,6X,I2,6X,I3,7X,I2,7X,I2,4X,F7
     +.0,6X,F4.3,5X,F6.2,3X,F5.2)
C
C
C
C.....ONLY PRINT THIS TABLE IF FULL OFF-LINE OUTPUT WAS REQUESTED
      IF(PRNTXX.EQ.0.OR.FULLXX.EQ.0) RETURN
C
```

```
      IPAGE=40
      IFLAG=1
      DO 230 IXXX1=1,MXI
        I=INO(IXXX1)
        IF(.NOT.(IPAGE.EQ.40)) GO TO 220
          WRITE( 7, 1)
          IPAGE=1
          IF(.NOT.(IFLAG.NE.1)) GO TO 210
            WRITE( 7, 2)
  210     CONTINUE
          WRITE( 7, 3)
  220   CONTINUE
        WRITE( 7, 4) I,(INOUN(I,K1),K1=1,24),(PTNUM(I,K2),K2=1,12),
     +    LFAC(I),LRU(I),NHI(I),GFE(I),INTEG(I),UP(I),RM(I),WT(I),PA(I)
        IFLAG=0
        IPAGE=IPAGE+1
  230 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE ITAB9A
C                                                                  810625 084913094
C*****************************************************************************
C*  PRINTS ITEM MAINTENANCE DATA                                             *
C*****************************************************************************
C
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      COMMON /FULLXX/ FULLXX
      INTEGER FULLXX
      COMMON /BCMH/ BCMH(150)
      COMMON /BMH/ BMH(150)
      COMMON /COND/ COND(150)
      COMMON /DMH/ DMH(150)
      COMMON /FPR/ FPR(150)
      COMMON /I/ I
      COMMON /INO/ INO(150)
      COMMON /IPCF/ IPCF(150)
      REAL IPCF
      COMMON /MTBMI/ MTBMI(150,4)
      REAL MTBMI
      COMMON /MXI/ MXI
      COMMON /NRTS/ NRTS(150)
      REAL NRTS
      COMMON /RIP/ RIP(150)
      COMMON /RL/ RL(150)
      INTEGER RL
      COMMON /RMH/ RMH(150)
      COMMON /RTS/ RTS(150)
    1 FORMAT(1H1/47X,39H INPUT TABLE 9A:  ITEM MAINTENANCE DATA)
    2 FORMAT(61X,11H(CONTINUED))
    3 FORMAT(//58X,8HFRACTION,10X,19H                    ,1X,7HFAILURE,1X
     +,4HBASE,1X,2HLV/6X,1H*,5X,34HMEAN TIME BETWEEN MAINT. INCIDENTS,5X
     +,6H*FALSE,1X,8HFAILURES,1X,8HCOST PER,2X,19HFRACTION FAILURES  ,6H
     +REMOVE,2X,5HBENCH,3X,7HBASE LV,1X,5HDEPOT/1X,6HITEM *,1X,43(1H-),5
     +H*PULL,2X,8HREPAIRED,1X,8HIN PLACE,2X,18H   REPAIRED AT    ,1X,7HR
     +EPLACE,1X,5HCHECK,3X,6HREPAIR,2X,6HREPAIR,1X,4HR.L./1X,5HINDEX,13H
     +*AIR-FIGHTER*,10HAIR-CARGO*,11HGRND-FIXED*,12HGRND-MOBILE*,4HRATE,
     +2X,8HIN PLACE,2X,6HREPAIR,2X,20H BASE DEPOT   COND  ,7HMAN HRS,1X,
     +7HMAN HRS,1X,7HMAN HRS,1X,6HMAN HR,1X,4HCODE/2X,3H(I),3X,8H(MTBMI1
     +),3X,8H(MTBMI2),3X,8H(MTBMI3),3X,8H(MTBMI4),3X,5H(FPR),2X,5H(RIP),
     +4X,6H(IPCF),2X,20H(RTS) (NRTS) (COND) ,2X,5H(RMH),2X,6H(BCMH),3X,5
     +H(BMH),3X,5H(DMH),1X,4H(RL)/)
    4 FORMAT(1X,I3,3X,F9.0,3(2X,F9.0),3X,F4.3,4X,F4.2,3X,F6.2,3X,F5.3,2X
     +,F5.3,2X,F5.3,2X,3(F5.2,3X),F5.2,1X,I4)
C
C
```

```
C
C.....ONLY PRINT THIS TABLE IF FULL OFF-LINE OUTPUT WAS REQUESTED
      IF(PRNTXX.EQ.0.OR.FULLXX.EQ.0) RETURN
C
      IPAGE=40
      IFLAG=1
      DO 230 IXXX1=1,MXI
        I=INO(IXXX1)
        IF(.NOT.(IPAGE.EQ.40)) GO TO 220
          WRITE( 7, 1)
          IPAGE=1
          IF(.NOT.(IFLAG.NE.1)) GO TO 210
            WRITE( 7, 2)
  210     CONTINUE
          WRITE( 7, 3)
  220   CONTINUE
        WRITE( 7, 4) I,(MTBMI(I,K1),K1=1,4),FPR(I),RIP(I),IPCF(I),
     +    RTS(I),NRTS(I),COND(I),RMH(I),BCMH(I),BMH(I),DMH(I),RL(I)
        IFLAG=0
        IPAGE=IPAGE+1
  230 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE ITAB9B
C                                                                  810625 084921438
C*****************************************************************************
C*  ATU MOD LCK                                                              *
C*  PRINTS ITEM REPAIR HOURS,TECH ORDER AND TR. DATA                         *
C*****************************************************************************
C
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      COMMON /FULLXX/ FULLXX
      INTEGER FULLXX
      COMMON /DATAB/ DATAB(150)
      INTEGER DATAB
      COMMON /DATAD/ DATAD(150)
      INTEGER DATAD
      COMMON /I/ I
      COMMON /INO/ INO(150)
      COMMON /MXI/ MXI
      COMMON /TIME1/ TIME1(150)
      INTEGER TIME1
      COMMON /UCTDEV/ UCTDEV(150)
    1 FORMAT(1H1/5X,43HINPUT TABLE 9B:  TECHNICAL ORDERS, TRAINING/22X,1
     +9HAND UCT DEVELOPMENT)
    2 FORMAT(28X,11H(CONTINUED))
    3 FORMAT(/ 15X,32HNUMBER OF TECH.      NO. OF HOURS,5X,3HUCT/5X,4HITE
     +M,6X,30HDATA PAGES FOR       FOR TYPE 1,6X,6HDEVMNT/5X,5HINDEX,5X,5
     +HDEPOT,5X,4HBASE,6X,8HTRAINING,9X,4HCOST/6X,3H(I),5X,16H(DATAD)  (
     +DATAB),5X,7H(TIME1),8X,8H(UCTDEV)/)
    4 FORMAT(6X,I3,7X,I3,6X,I3,9X,I3,9X,F7.0)
C
C
C
C.....ONLY PRINT THIS TABLE IF FULL OFF-LINE OUTPUT WAS REQUESTED
      IF(PRNTXX.EQ.0.OR.FULLXX.EQ.0) RETURN
C
      IPAGE=40
      IFLAG=1
      DO 230 IXXX1=1,MXI
        I=INO(IXXX1)
        IF(.NOT.(IPAGE.EQ.40)) GO TO 220
          WRITE( 7, 1)
          IPAGE=1
          IF(.NOT.(IFLAG.NE.1)) GO TO 210
            WRITE( 7, 2)
  210     CONTINUE
          WRITE( 7, 3)
  220   CONTINUE
```

```
          WRITE( 7, 4) I,DATAD(I),DATAB(I),TIME1(I),UCTDEV(I)
          IFLAG=0
          IPAGE=IPAGE+1
  230 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE ITB10A
C                                                                  810625 084928169
C*****************************************************************************
C*  ATU MOD LCR                                                              *
C*  PRINTS ITEM/SUPPORT EQUIPMENT CROSS-REFERENCE                            *
C*****************************************************************************
C
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      COMMON /FULLXX/ FULLXX
      INTEGER FULLXX
      COMMON /A/ A(150,4,3)
      INTEGER A
      COMMON /I/ I
      COMMON /INO/ INO(150)
      COMMON /IRMIN/ IRMIN(150,4)
      COMMON /IRMT/ IRMT
      COMMON /MXI/ MXI
      COMMON /MXIRMT/ MXIRMT
      COMMON /NJA/ NJA(150,4)
      COMMON /QSA/ QSA(150,4,3)
    1 FORMAT(1H1/23X,66HINPUT TABLE 10A: ITEM/SE CROSS REFERENCE DATA -
     +DEPOT LEVEL REPAIR)
    2 FORMAT(41X,11H(CONTINUED))
    3 FORMAT(//7X,5HNUMB./7X,5HOF SE,2X,2HSE,17(4X,2HSE)/1X,4HITEM,2X,4H
     +TYPE, 9(1X,5HINDEX,1X,5HQUAN-)/1X,5HINDEX,1X,5HREQRD,2X,3HNO.,2X,4
     +HTITY,8(3X,3HNO.,2X,4HTITY)/2X,3H(I),2X,5H(NJA), 9(2X,3H(A),2X,5H(
     +QSA))/)
    4 FORMAT(2X,I3,3X,I3,28(9(2X,I4,2X,F4.0)/))
C
C
C
C.....ONLY PRINT THIS TABLE IF FULL OFF-LINE OUTPUT WAS REQUESTED
      IF(PRNTXX.EQ.0.OR.FULLXX.EQ.0) RETURN
C
      IFLAG=1
      IPAGE=40
      DO 240 IXXXI=1,MXI
        I=INO(IXXXI)
        IF(.NOT.(IPAGE.EQ.40)) GO TO 220
          WRITE( 7, 1)
          IPAGE=1
          IF(.NOT.(IFLAG.NE.1)) GO TO 210
            WRITE( 7, 2)
  210     CONTINUE
          WRITE( 7, 3)
          IPAGE=1
```

```
  220   CONTINUE
        DO 230 IRMT=1,MXIRMT
          IF(.NOT.(IRMIN(I,IRMT).EQ.1)) GO TO 230
          WRITE( 7, 4) I,NJA(I,IRMT),(A(I,IRMT,K2),QSA(I,IRMT,K2),K2=1,
     +       3)
  230   CONTINUE
        IFLAG=0
        IPAGE=IPAGE+1
  240 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE ITB10B
C                                                          810625 084932651
C*********************************************************************
C*  ATU MOD LCR                                                      *
C*  PRINTS ITEM/SUPPORT EQUIPMENT CROSS-REFERENCE                    *
C*********************************************************************
C
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      COMMON /FULLXX/ FULLXX
      INTEGER FULLXX
      COMMON /A/ A(150,4,3)
      INTEGER A
      COMMON /I/ I
      COMMON /INO/ INO(150)
      COMMON /IRMIN/ IRMIN(150,4)
      COMMON /IRMT/ IRMT
      COMMON /MXI/ MXI
      COMMON /MXIRMT/ MXIRMT
      COMMON /NJA/ NJA(150,4)
      COMMON /QSA/ QSA(150,4,3)
    1 FORMAT(1H1/23X,68HINPUT TABLE 10B: ITEM/SE CROSS REFERENCE DATA -
     +BASE LEVEL, PSE ONLY)
    2 FORMAT(41X,11H(CONTINUED))
    3 FORMAT(//7X,5HNUMB./7X,5HOF SE,2X,2HSE,17(4X,2HSE)/1X,4HITEM,2X,4H
     +TYPE, 9(1X,5HINDEX,1X,5HQUAN-)/1X,5HINDEX,1X,5HREQRD,2X,3HNO.,2X,4
     +HTITY,8(3X,3HNO.,2X,4HTITY)/2X,3H(I),2X,5H(NJA), 9(2X,3H(A),2X,5H(
     +QSA))/)
    4 FORMAT(2X,I3,3X,I3,28(9(2X,I4,2X,F4.0)/))
C
C
C
C.....ONLY PRINT THIS TABLE IF FULL OFF-LINE OUTPUT WAS REQUESTED
      IF(PRNTXX.EQ.0.OR.FULLXX.EQ.0) RETURN
C
      IFLAG=1
      IPAGE=40
      DO 240 IXXX1=1,MXI
        I=INO(IXXX1)
        IF(.NOT.(IPAGE.EQ.40)) GO TO 220
          WRITE( 7, 1)
          IPAGE=1
          IF(.NOT.(IFLAG.NE.1)) GO TO 210
            WRITE( 7, 2)
  210     CONTINUE
          WRITE( 7, 3)
          IPAGE=1
```

```
  220   CONTINUE
        DO 230 IRMT=1,MXIRMT
          IF(.NOT.(IRMIN(I,IRMT).EQ.2)) GO TO 230
          WRITE( 7, 4) I,NJA(I,IRMT),(A(I,IRMT,K2),QSA(I,IRMT,K2),K2=1,
     +      3)
  230   CONTINUE
        IFLAG=0
        IPAGE=IPAGE+1
  240 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE ITB10C
C                                                                  810625 084939578
C*****************************************************************************
C*  ATU MOD LCR                                                              *
C*  PRINTS ITEM/SUPPORT EQUIPMENT CROSS-REFERENCE                            *
C*****************************************************************************
C
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      COMMON /FULLXX/ FULLXX
      INTEGER FULLXX
      COMMON /A/ A(150,4,3)
      INTEGER A
      COMMON /I/ I
      COMMON /INO/ INO(150)
      COMMON /IRMIN/ IRMIN(150,4)
      COMMON /IRMT/ IRMT
      COMMON /MXI/ MXI
      COMMON /MXIRMT/ MXIRMT
      COMMON /NJA/ NJA(150,4)
      COMMON /QSA/ QSA(150,4,3)
    1 FORMAT(1H1/23X,63HINPUT TABLE 10C: ITEM/SE CROSS REFERENCE DATA -
     +BASE LEVEL, MBS)
    2 FORMAT(41X,11H(CONTINUED))
    3 FORMAT(//7X,5HNUMB./7X,5HOF SE,2X,2HSE,17(4X,2HSE)/1X,4HITEM,2X,4H
     +TYPE, 9(1X,5HINDEX,1X,5HQUAN-)/1X,5HINDEX,1X,5HREQRD,2X,3HNO.,2X,4
     +HTITY,8(3X,3HNO.,2X,4HTITY)/2X,3H(I),2X,5H(NJA), 9(2X,3H(A),2X,5H(
     +QSA))/)
    4 FORMAT(2X,I3,3X,I3,28(9(2X,I4,2X,F4.0)/))
C
C
C
C.....ONLY PRINT THIS TABLE IF FULL OFF-LINE OUTPUT WAS REQUESTED
      IF(PRNTXX.EQ.0.OR.FULLXX.EQ.0) RETURN
C
      IFLAG=1
      IPAGE=40
      DO 240 IXXX1=1,MXI
        I=INO(IXXX1)
        IF(.NOT.(IPAGE.EQ.40)) GO TO 220
          WRITE( 7, 1)
          IPAGE=1
          IF(.NOT.(IFLAG.NE.1)) GO TO 210
            WRITE( 7, 2)
  210     CONTINUE
          WRITE( 7, 3)
          IPAGE=1
```

```
  220   CONTINUE
        DO 230 IRMT=1,MXIRMT
          IF(.NOT.(IRMIN(I,IRMT).EQ.3)) GO TO 230
          WRITE( 7, 4) I,NJA(I,IRMT),(A(I,IRMT,K2),QSA(I,IRMT,K2),K2=1,
     +       3)
  230   CONTINUE
        IFLAG=0
        IPAGE=IPAGE+1
  240 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE ITB10D
C                                                          810625 084943099
C*****************************************************************************
C*  ATU MOD LCR                                                              *
C*  PRINTS ITEM/SUPPORT EQUIPMENT CROSS-REFERENCE                            *
C*****************************************************************************
C
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      COMMON /FULLXX/ FULLXX
      INTEGER FULLXX
      COMMON /A/ A(150,4,3)
      INTEGER A
      COMMON /I/ I
      COMMON /INO/ INO(150)
      COMMON /IRMIN/ IRMIN(150,4)
      COMMON /IRMT/ IRMT
      COMMON /MXI/ MXI
      COMMON /MXIRMT/ MXIRMT
      COMMON /NJA/ NJA(150,4)
      COMMON /QSA/ QSA(150,4,3)
    1 FORMAT(1H1/23X,63HINPUT TABLE 10D: ITEM/SE CROSS REFERENCE DATA -
     +BASE LEVEL, UCT)
    2 FORMAT(41X,11H(CONTINUED))
    3 FORMAT(//7X,5HNUMB./7X,5HOF SE,2X,2HSE,17(4X,2HSE)/1X,4HITEM,2X,4H
     +TYPE, 9(1X,5HINDEX,1X,5HQUAN-)/1X,5HINDEX,1X,5HREQRD,2X,3HNO.,2X,4
     +HTITY,8(3X,3HNO.,2X,4HTITY)/2X,3H(I),2X,5H(NJA), 9(2X,3H(A),2X,5H(
     +QSA))/)
    4 FORMAT(2X,I3,3X,I3,28(9(2X,I4,2X,F4.0)/))
C
C
C
C.....ONLY PRINT THIS TABLE IF FULL OFF-LINE OUTPUT WAS REQUESTED
      IF(PRNTXX.EQ.0.OR.FULLXX.EQ.0) RETURN
C
      IFLAG=1
      IPAGE=40
      DO 240 IXXX1=1,MXI
        I=INO(IXXX1)
        IF(.NOT.(IPAGE.EQ.40)) GO TO 220
          WRITE( 7, 1)
          IPAGE=1
          IF(.NOT.(IFLAG.NE.1)) GO TO 210
            WRITE( 7, 2)
  210     CONTINUE
          WRITE( 7, 3)
          IPAGE=1
```

```
  220   CONTINUE
        DO 230 IRMT=1,MXIRMT
          IF(.NOT.(IRMIN(I,IRMT).EQ.4)) GO TO 230
          WRITE( 7, 4) I,NJA(I,IRMT),(A(I,IRMT,K2),QSA(I,IRMT,K2),K2=1,
     +       3)
  230   CONTINUE
        IFLAG=0
        IPAGE=IPAGE+1
  240 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE ITAB11
C                                                              810625 084945134
C*****************************************************************************
C*  PRINTS ITEM CONFIGURATIONS ON PLATFORMS DATA FILE                        *
C*****************************************************************************
C
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      COMMON /FULLXX/ FULLXX
      INTEGER FULLXX
      COMMON /I/ I
      COMMON /INO/ INO(150)
      COMMON /MXI/ MXI
      COMMON /NITEM/ NITEM(150,5)
      REAL NITEM
      COMMON /NP/ NP
    1 FORMAT(1H1/3X,65HINPUT TABLE 11A:  ITEM CONFIGURATIONS ON PLATFORM
     +S - NITEM(I,NP) )
    2 FORMAT(29X,11H(CONTINUED))
    3 FORMAT(//2X,4HITEM,15X,47HAVE. NUMBER OF ITEMS INSTALLED ON PLATFO
     +RM TYPE/2X,5HINDEX,3X,69(1H-)/3X,3H(I), 12X,1H1,5X,1H2,5X,1H3,5X,1
     +H4,5X,1H5,5X,1H6,5X,1H7,5X,1H8,5X,1H9,5X,2H10/)
    4 FORMAT(3X,I3,9X,10(F5.2,1X))
C
C
C
C.....ONLY PRINT THIS TABLE IF FULL OFF-LINE OUTPUT WAS REQUESTED
      IF(PRNTXX.EQ.0.OR.FULLXX.EQ.0) RETURN
C
      IFLAG=1
      IPAGE=40
      DO 230 IXXX1=1,MXI
        I=INO(IXXX1)
        IF(.NOT.(IPAGE.EQ.40)) GO TO 220
          WRITE( 7, 1)
          IPAGE=1
          IF(.NOT.(IFLAG.NE.1)) GO TO 210
            WRITE( 7, 2)
  210     CONTINUE
          WRITE( 7, 3)
  220   CONTINUE
        WRITE( 7, 4) I,(NITEM(I,NP),NP=1,5)
        IFLAG=0
        IPAGE=IPAGE+1
  230 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE ZFAIL
C                                                          810625 084947936
C*****************************************************************************
C*  COMPUTES AUXILIARY VARIABLE FAIL(I,NS)                                   *
C*****************************************************************************
C
      COMMON /APFH/ APFH(5,3)
      COMMON /FAIL/ FAIL(150,10)
      COMMON /I/ I
      COMMON /INO/ INO(150)
      COMMON /KFAC/ KFAC(4)
      REAL KFAC
      COMMON /LE/ LE(5)
      COMMON /LO/ LO(10)
      COMMON /MTBMI/ MTBMI(150,4)
      REAL MTBMI
      COMMON /MXI/ MXI
      COMMON /MXNP/ MXNP
      COMMON /MXNS/ MXNS
      COMMON /NITEM/ NITEM(150,5)
      REAL NITEM
      COMMON /NP/ NP
      COMMON /NPLT/ NPLT(5,10)
      REAL NPLT
      COMMON /NS/ NS
      COMMON /RIP/ RIP(150)
      COMMON /TFAC/ TFAC(5)
      COMMON /XFR/ XFR
C
C
      DO 230 NS=1,MXNS
        DO 220 IXXX2=1,MXI
          I=INO(IXXX2)
          DO 210 NP=1,MXNP
            IF(.NOT.(NITEM(I,NP).GT..000001)) GO TO 210
            FL=NITEM(I,NP)*(1.-RIP(I))*NPLT(NP,NS)*APFH(NP,LO(NS))*
     +        TFAC(NP)*KFAC(LE(NP))*XFR/MTBMI(I,LE(NP))
            FAIL(I,NS)=FAIL(I,NS)+FL
  210     CONTINUE
  220   CONTINUE
  230 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE ZNFB
C                                                          810625 084953158
C*****************************************************************************
C*  COMPUTES PIPELINE SPARES NFB(I,NS) AT BASE NS                            *
C*  AND NFD(I) AT THE DEPOT                                                  *
C*****************************************************************************
C
      COMMON /B/ B
      INTEGER B
      COMMON /BRCT/ BRCT
      COMMON /BTYPE/ BTYPE(10)
      INTEGER BTYPE
      COMMON /COND/ COND(150)
      COMMON /CRCT/ CRCT
      COMMON /DAD/ DAD
      COMMON /DRCT/ DRCT(3)
      COMMON /FAIL/ FAIL(150,10)
      COMMON /FPR/ FPR(150)
      COMMON /I/ I
      COMMON /INO/ INO(150)
      COMMON /LO/ LO(10)
      COMMON /LRU/ LRU(150)
      COMMON /MXI/ MXI
      COMMON /MXNS/ MXNS
      COMMON /NBC/ NBC(10)
      REAL NBC
      COMMON /NFB/ NFB(150,10)
      REAL NFB
      COMMON /NFD/ NFD(150)
      REAL NFD
      COMMON /NHB/ NHB(10)
      COMMON /NHI/ NHI(150)
      COMMON /NRTS/ NRTS(150)
      REAL NRTS
      COMMON /NS/ NS
      COMMON /OST/ OST(3)
      COMMON /OSTC/ OSTC
      COMMON /RTS/ RTS(150)
      COMMON /TNB/ TNB(10)
      COMMON /XFPR/ XFPR
      REAL NHNRT
      REAL NHRT
C
C
      DO 270 IXXX1=1,MXI
        I=INO(IXXX1)
        XF=XFPR*FPR(I)
```

```
        NHRT=0.
        NHNRT=0.
        IF(.NOT.(NHI(I).NE.0)) GO TO 210
          NHRT=RTS(NHI(I))
          NHNRT=NRTS(NHI(I))
  210   CONTINUE
        DO 260 NS=1,MXNS
          SFL=0.
          IF(.NOT.(BTYPE(NS).EQ.3)) GO TO 220
C
C..........COMPUTE SATELLITE BASE FAILURES
            NFB(I,NS)=FAIL(I,NS)*FLOAT(LRU(I))*(1.+XF)*OSTC
  220       CONTINUE
            IF(.NOT.(BTYPE(NS).EQ.2)) GO TO 240
C
C..........COMPUTE BASE FAILURES FROM SATELLITES
            TEM01=0.
            DO 230 B=1,MXNS
              IF(.NOT.(NHB(B).EQ.NS)) GO TO 230
              TEM01=TEM01+FAIL(I,B)*NBC(B)
  230         CONTINUE
              SFL=TEM01
              SFL=SFL*(FLOAT(LRU(I))+NHRT)*((RTS(I)+XF)*CRCT+(NRTS(I)+
     +          COND(I))*(OST(LO(NS))+U(XF)*CRCT))
  240       CONTINUE
            IF(.NOT.(BTYPE(NS).LT.3)) GO TO 250
              NFB(I,NS)=FAIL(I,NS)*(FLOAT(LRU(I))+NHRT)*((RTS(I)+XF)*BRCT+
     +          (NRTS(I)+COND(I))*OST(LO(NS)))+SFL
  250       CONTINUE
            NFD(I)=NFD(I)+FAIL(I,NS)*TNB(NS)*((FLOAT(LRU(I))+NHRT)*NRTS(I)
     +        *DRCT(LO(NS))+NHNRT*(1.-COND(I))*DAD)
  260     CONTINUE
  270   CONTINUE
C
        RETURN
        END
```

```
      SUBROUTINE ZERHB
C                                                          810625 085002830
C*****************************************************************************
C*  COMPUTES ITEM INTERMEDIATE REPAIR HOURS PER MONTH,                       *
C*  ERHBI(I,NS) AT BASE NS AND ERHD(I) AT THE DEPOT.                         *
C*****************************************************************************
C
      COMMON /B/ B
      INTEGER B
      COMMON /BCMH/ BCMH(150)
      COMMON /BMF/ BMF
      COMMON /BMH/ BMH(150)
      COMMON /BTYPE/ BTYPE(10)
      INTEGER BTYPE
      COMMON /COND/ COND(150)
      COMMON /DMF/ DMF
      COMMON /DMH/ DMH(150)
      COMMON /EBCBI/ EBCBI(150,10)
      COMMON /ERHBI/ ERHBI(150,10)
      COMMON /ERHD/ ERHD(150)
      COMMON /ERTBI/ ERTBI(150,10)
      COMMON /FAIL/ FAIL(150,10)
      COMMON /FPR/ FPR(150)
      COMMON /I/ I
      COMMON /INO/ INO(150)
      COMMON /LRU/ LRU(150)
      COMMON /MXI/ MXI
      COMMON /MXNS/ MXNS
      COMMON /NBC/ NBC(10)
      REAL NBC
      COMMON /NHB/ NHB(10)
      COMMON /NHI/ NHI(150)
      COMMON /NRTS/ NRTS(150)
      REAL NRTS
      COMMON /NS/ NS
      COMMON /RTS/ RTS(150)
      COMMON /TNB/ TNB(10)
      COMMON /XFPR/ XFPR
      REAL NHNRT
      REAL NHRT
C
C
      DO 260 IXXX1=1,MXI
        I=INO(IXXX1)
        NHRT=0.
        NHNRT=0.
        IF(.NOT.(NHI(I).NE.0)) GO TO 210
```

```
          NHRT=RTS(NHI(I))
          NHNRT=NRTS(NHI(I))
  210   CONTINUE
        XF=XFPR*FPR(I)
        DO 250 NS=1,MXNS
          SFL1=0.
          SFL2=0.
          ERHBI(I,NS)=0
          EBCBI(I,NS)=0.
          ERTBI(I,NS)=0.
          IF(.NOT.(BTYPE(NS).EQ.2)) GO TO 230
C
C.....INCLUDE REPAIRS FROM SATELLITE BASES
            TEM01=0.
            DO 220 B=1,MXNS
              IF(.NOT.(NHB(B).EQ.NS)) GO TO 220
              TEM01=TEM01+FAIL(I,B)*NBC(B)
  220         CONTINUE
            SFL1=TEM01
            SFL2=SFL1*(FLOAT(LRU(I))+NHRT)*U(1.-COND(I))*RTS(I)*BMH(I)*
     +        BMF
            SFL1=SFL1*(FLOAT(LRU(I))+NHRT)*((RTS(I)+NRTS(I)+XF+U(XF)*
     +        COND(I))*BCMH(I))*BMF
  230     CONTINUE
          IF(.NOT.(BTYPE(NS).LT.3)) GO TO 240
            EBCBI(I,NS)=FAIL(I,NS)*(FLOAT(LRU(I))+NHRT)*((1.+XF)*BCMH(I)
     +        )*BMF+SFL1
            ERTBI(I,NS)=FAIL(I,NS)*(FLOAT(LRU(I))+NHRT)*U(1.-COND(I))*
     +        RTS(I)*BMH(I)*BMF+SFL2
            ERHBI(I,NS)=EBCBI(I,NS)+ERTBI(I,NS)
  240     CONTINUE
          ERHD(I)=ERHD(I)+FAIL(I,NS)*TNB(NS)*((FLOAT(LRU(I))+NHRT)*
     +      NRTS(I)+NHNRT*(1.-COND(I)))*DMH(I)*DMF
  250   CONTINUE
  260 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE ZERHSE
C                                                          810625 085010420
C*****************************************************************************
C*  ATU MOD SLR - 21 MAY 80                                                  *
C*  CALCULATES EXPECTED MANHOURS PER MONTH                                   *
C*  THAT SUPPORT EQUIP. TYPE L IS UTILIZED,                                  *
C*  ERHAB(L,NS) AT BASE NS AND ERHAD(L) AT THE DEPOT.                        *
C*****************************************************************************
C
      COMMON /A/ A(150,4,3)
      INTEGER A
      COMMON /BSP/ BSP(10)
      INTEGER BSP
      COMMON /EBCBI/ EBCBI(150,10)
      COMMON /ERHAB/ ERHAB(120,10)
      COMMON /ERHAD/ ERHAD(120)
      COMMON /ERHD/ ERHD(150)
      COMMON /ERTBI/ ERTBI(150,10)
      COMMON /I/ I
      COMMON /INO/ INO(150)
      COMMON /IRMIN/ IRMIN(150,4)
      COMMON /IRMT/ IRMT
      COMMON /L/ L
      COMMON /LT/ LT
      COMMON /MXI/ MXI
      COMMON /MXIRMT/ MXIRMT
      COMMON /MXLT/ MXLT
      COMMON /MXNS/ MXNS
      COMMON /NJA/ NJA(150,4)
      COMMON /NRM/ NRM(150)
      COMMON /NS/ NS
      COMMON /QSA/ QSA(150,4,3)
      COMMON /RMI/ RMI(150,10)
      INTEGER RMI
      INTEGER FLAG
      INTEGER FLAG1
      INTEGER FLAG2
      INTEGER FLAG3
      INTEGER SECODE
C
C
      DO 410 IXXX1=1,MXI
        I=INO(IXXX1)
        NXXX1=NRM(I)
        IF(.NOT.(NXXX1.NE.0)) GO TO 400
          DO 280 NS=1,MXNS
            RMI(I,NS)=BSP(NS)+1
```

```
          FLAG1=0
          FLAG2=0
          DO 240 IRMT=1,MXIRMT
            IF(.NOT.(IRMT.LE.NXXX1)) GO TO 250
            IF(.NOT.(IRMIN(I,IRMT).EQ.RMI(I,NS))) GO TO 210
              FLAG1=IRMT
210         CONTINUE
            IF(.NOT.(IRMIN(I,IRMT).EQ.2)) GO TO 220
              FLAG2=IRMT
220         CONTINUE
            IF(.NOT.(IRMIN(I,IRMT).EQ.1)) GO TO 230
              FLAG3=IRMT
230         CONTINUE
240       CONTINUE
250       CONTINUE
          FLAG=FLAG1
          IF(.NOT.(FLAG1.EQ.0)) GO TO 270
            FLAG=FLAG2
            RMI(I,NS)=2
            IF(.NOT.(FLAG2.EQ.0)) GO TO 260
              FLAG=FLAG3
              RMI(I,NS)=1
260         CONTINUE
270       CONTINUE
280     CONTINUE
        DO 380 IRMT=1,MXIRMT
          IF(.NOT.(IRMT.LE.NXXX1)) GO TO 390
          NXXX2=NJA(I,IRMT)
          IF(.NOT.(NXXX2.NE.0)) GO TO 370
            DO 350 LT=1,MXLT
              IF(.NOT.(LT.LE.NXXX2)) GO TO 360
              L=A(I,IRMT,LT)
              IF(.NOT.(IRMIN(I,IRMT).EQ.1)) GO TO 300
                SECODE=INT(QSA(I,IRMT,LT)/100.)
                IF(.NOT.(SECODE.GT.0.AND.SECODE.LT.3)) GO TO 290
                  ERHAD(L)=ERHAD(L)+ERHD(I)
290             CONTINUE
300           CONTINUE
              DO 340 NS=1,MXNS
                IF(.NOT.(IRMIN(I,IRMT).EQ.RMI(I,NS))) GO TO 330
                  SECODE=INT(QSA(I,IRMT,LT)/100.)
                  IF(.NOT.(SECODE.GT.1)) GO TO 310
                    ERHAB(L,NS)=ERHAB(L,NS)+EBCBI(I,NS)
310               CONTINUE
                  IF(.NOT.(SECODE.GT.0.AND.SECODE.LT.3)) GO TO 320
                    ERHAB(L,NS)=ERHAB(L,NS)+ERTBI(I,NS)
320               CONTINUE
```

```
  330              CONTINUE
  340            CONTINUE
  350          CONTINUE
  360          CONTINUE
  370        CONTINUE
  380      CONTINUE
  390      CONTINUE
  400    CONTINUE
  410 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE ZISET
C                                                                  810625 085021477
C*****************************************************************************
C*  ATU MOD SLR 21 MAY 80                                                    *
C*  CALCULATES THE MAXIMUM NUMBER OF SUPPORT                                 *
C*  EQUIP. OF TYPE L REQUIRED:ISET(L,NS) AT                                  *
C*  BASE NS AND ISETD(L) AT THE DEPOT                                        *
C*****************************************************************************
C
      COMMON /A/ A(150,4,3)
      INTEGER A
      COMMON /ERHBI/ ERHBI(150,10)
      COMMON /ERHD/ ERHD(150)
      COMMON /I/ I
      COMMON /INO/ INO(150)
      COMMON /IRMIN/ IRMIN(150,4)
      COMMON /IRMT/ IRMT
      COMMON /ISET/ ISET(120,10)
      REAL ISET
      COMMON /ISETD/ ISETD(120)
      REAL ISETD
      COMMON /L/ L
      COMMON /LT/ LT
      COMMON /MXI/ MXI
      COMMON /MXIRMT/ MXIRMT
      COMMON /MXLT/ MXLT
      COMMON /MXNS/ MXNS
      COMMON /NJA/ NJA(150,4)
      COMMON /NRM/ NRM(150)
      COMMON /NS/ NS
      COMMON /QSA/ QSA(150,4,3)
      COMMON /RMI/ RMI(150,10)
      INTEGER RMI
C
C
      DO 360 IXXX1=1,MXI
        I=INO(IXXX1)
        NXXX1=NRM(I)
        IF(.NOT.(NXXX1.NE.0)) GO TO 350
          DO 270 NS=1,MXNS
            IF(.NOT.(ERHBI(I,NS).GT.0.000001)) GO TO 270
            DO 250 IRMT=1,MXIRMT
              IF(.NOT.(IRMT.LE.NXXX1)) GO TO 260
              IF(.NOT.(IRMIN(I,IRMT).EQ.RMI(I,NS))) GO TO 240
                NXXX2=NJA(I,IRMT)
                IF(.NOT.(NXXX2.NE.0)) GO TO 230
                  DO 210 LT=1,MXLT
```

```
                    IF(.NOT.(LT.LE.NXXX2)) GO TO 220
                    L=A(I,IRMT,LT)
                    TQSA=QSA(I,IRMT,LT)-AINT(QSA(I,IRMT,LT)/100.)*100.
                    ISET(L,NS)=AMAX1(ISET(L,NS),TQSA)
  210             CONTINUE
  220             CONTINUE
                CONTINUE
              CONTINUE
            CONTINUE
            CONTINUE
          CONTINUE
          IF(.NOT.(ERHD(I).GT.0.000001)) GO TO 340
            DO 320 IRMT=1,MXIRMT
              IF(.NOT.(IRMT.LE.NXXX1)) GO TO 330
              IF(.NOT.(IRMIN(I,IRMT).EQ.1)) GO TO 310
                NXXX2=NJA(I,IRMT)
                IF(.NOT.(NXXX2.GT.0)) GO TO 300
                  DO 280 LT=1,MXLT
                    IF(.NOT.(LT.LE.NXXX2)) GO TO 290
                    L=A(I,IRMT,LT)
                    TQSA=QSA(I,IRMT,LT)-AINT(QSA(I,IRMT,LT)/100.)*100.
                    ISETD(L)=AMAX1(ISETD(L),TQSA)
  280             CONTINUE
  290             CONTINUE
  300           CONTINUE
  310         CONTINUE
  320       CONTINUE
  330       CONTINUE
  340     CONTINUE
  350   CONTINUE
  360 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE ZUSE
C                                                          810625 085037203
C*****************************************************************************
C*  COMPUTES UTILIZATION TO BE USED FOR                                      *
C*  SENSITIVITY BMF &DMF FACTORS                                             *
C*****************************************************************************
C
      COMMON /BAA/ BAA
      COMMON /DAA/ DAA
      COMMON /ERHAB/ ERHAB(120,10)
      COMMON /ERHAD/ ERHAD(120)
      COMMON /L/ L
      COMMON /MUSE/ MUSE
      REAL MUSE
      COMMON /MXL/ MXL
      COMMON /MXNS/ MXNS
      COMMON /NS/ NS
      COMMON /SEINO/ SEINO(120)
      INTEGER SEINO
      COMMON /SETYPE/ SETYPE(120)
      INTEGER SETYPE
      COMMON /USE/ USE(120,10)
      COMMON /USED/ USED(120)
      REAL MUSEB
      REAL MUSED
C
C
      MUSEB=MUSE*BAA
      MUSED=MUSE*DAA
      DO 250 IXXX1=1,MXL
        L=SEINO(IXXX1)
        IF(.NOT.(SETYPE(L).GE.2)) GO TO 240
          DO 220 NS=1,MXNS
            IF(.NOT.(ERHAB(L,NS).GT..000001.AND.ERHAB(L,NS).LT.
     +        MUSEB)) GO TO 210
              USE(L,NS)=0.
  210       CONTINUE
  220     CONTINUE
          IF(.NOT.(ERHAD(L).GT..000001.AND.ERHAD(L).LT.MUSED)) GO TO 230
            USED(L)=0.
  230     CONTINUE
  240   CONTINUE
  250 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE ZTYPE
C                                                              810625 085042000
C*****************************************************************************
C*  COMPUTES SAT AND CIMF FACTORS ACCORDING                                  *
C*  TO BTYPE FOR SENSITIVITY CALCULATIONS                                    *
C*****************************************************************************
C
      COMMON /BTYPE/ BTYPE(10)
      INTEGER BTYPE
      COMMON /CIMF/ CIMF(10)
      COMMON /MXNS/ MXNS
      COMMON /NS/ NS
      COMMON /SAT/ SAT(10)
C
C
      DO 230 NS=1,MXNS
        SAT(NS)=0.
        CIMF(NS)=0.
        IF(.NOT.(BTYPE(NS).EQ.3)) GO TO 210
          SAT(NS)=1.
  210   CONTINUE
        IF(.NOT.(BTYPE(NS).EQ.2)) GO TO 220
          CIMF(NS)=1.
  220   CONTINUE
  230 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE ZTFR
C                                                          810625 085044519
C*****************************************************************************
C*  COMPUTES ITEM FAILURE RATE                                               *
C*****************************************************************************
C
      COMMON /APFH/ APFH(5,3)
      COMMON /FAIL/ FAIL(150,10)
      COMMON /FPLT/ FPLT(150)
      COMMON /FPM/ FPM(150)
      COMMON /I/ I
      COMMON /INO/ INO(150)
      COMMON /LO/ LO(10)
      COMMON /MXI/ MXI
      COMMON /MXNP/ MXNP
      COMMON /MXNS/ MXNS
      COMMON /NITEM/ NITEM(150,5)
      REAL NITEM
      COMMON /NP/ NP
      COMMON /NPLT/ NPLT(5,10)
      REAL NPLT
      COMMON /NS/ NS
      COMMON /PIUP/ PIUP
      COMMON /TFAC/ TFAC(5)
      COMMON /TFR/ TFR(150)
      COMMON /TNB/ TNB(10)
C
C
      DO 250 IXXX1=1,MXI
        I=INO(IXXX1)
        TFR(I)=0.0
        TEM01=0.
        DO 210 NS=1,MXNS
          TEM01=TEM01+TNB(NS)*FAIL(I,NS)
  210   CONTINUE
        FPM(I)=TEM01
        FPLT(I)=12.*PIUP*FPM(I)
        TEM03=0.
        DO 230 NS=1,MXNS
          TEM02=0.
          DO 220 NP=1,MXNP
            TEM02=TEM02+NITEM(I,NP)*NPLT(NP,NS)*APFH(NP,LO(NS))*TFAC(NP)
  220     CONTINUE
          TEM03=TEM03+TNB(NS)*TEM02
  230   CONTINUE
        TOO=TEM03
        IF(.NOT.(TOO.GE.0.000001)) GO TO 240
```

```
            TFR(I)=FPM(I)*1000000./TOO
  240     CONTINUE
  250   CONTINUE
C
        RETURN
        END
```

```
      SUBROUTINE ZSECI
C                                                          810625 085048566
C*****************************************************************************
C*  COMPUTES SECI(I),THE PRO RATA PART OF SEC                                *
C*  ATU MOD JRC 2 JUN 80                                                     *
C*****************************************************************************
C
      COMMON /A/ A(150,4,3)
      INTEGER A
      COMMON /BAA/ BAA
      COMMON /COND/ COND(150)
      COMMON /CSE/ CSE(120)
      COMMON /DAA/ DAA
      COMMON /ERHA/ ERHA(120)
      COMMON /ERHAB/ ERHAB(120,10)
      COMMON /ERHAD/ ERHAD(120)
      COMMON /ERHBI/ ERHBI(150,10)
      COMMON /ERHD/ ERHD(150)
      COMMON /I/ I
      COMMON /INO/ INO(150)
      COMMON /IRMIN/ IRMIN(150,4)
      COMMON /IRMT/ IRMT
      COMMON /ISET/ ISET(120,10)
      REAL ISET
      COMMON /ISETD/ ISETD(120)
      REAL ISETD
      COMMON /L/ L
      COMMON /LT/ LT
      COMMON /MSE/ MSE(120)
      REAL MSE
      COMMON /MXI/ MXI
      COMMON /MXIRMT/ MXIRMT
      COMMON /MXL/ MXL
      COMMON /MXLT/ MXLT
      COMMON /MXNS/ MXNS
      COMMON /NJA/ NJA(150,4)
      COMMON /NRM/ NRM(150)
      COMMON /NS/ NS
      COMMON /NSEB/ NSEB(120,10)
      REAL NSEB
      COMMON /NSED/ NSED(120)
      REAL NSED
      COMMON /PBDV/ PBDV(120)
      COMMON /PDDV/ PDDV(120)
      COMMON /PIUP/ PIUP
      COMMON /QSA/ QSA(150,4,3)
      COMMON /RMI/ RMI(150,10)
```

```
      INTEGER RMI
      COMMON /SECB/ SECB(120)
      COMMON /SECD/ SECD(120)
      COMMON /SECI/ SECI(150)
      COMMON /SEDEV/ SEDEV(120)
      COMMON /SEDV/ SEDV(120)
      COMMON /SEINO/ SEINO(120)
      INTEGER SEINO
      COMMON /SETYPE/ SETYPE(120)
      INTEGER SETYPE
      COMMON /TERHB/ TERHB(120)
      COMMON /TERHD/ TERHD(120)
      COMMON /TNB/ TNB(10)
      COMMON /TUCTDC/ TUCTDC
      COMMON /UCTDC/ UCTDC(150)
      COMMON /UCTDEV/ UCTDEV(150)
      REAL NXXX1
      REAL NXXX2
      DIMENSION T2(150,120)
      DIMENSION T4(150,120)
C
C
      DO 210 IXXX1=1,MXI
        I=INO(IXXX1)
        UCTDC(I)=UCTDEV(I)*U(1.-COND(I))
        TUCTDC=TUCTDC+UCTDC(I)
  210 CONTINUE
      DO 270 IXXX1=1,MXL
        L=SEINO(IXXX1)
        DO 240 NS=1,MXNS
          IF(.NOT.(SETYPE(L).EQ.1)) GO TO 220
            NSEB(L,NS)=ERHAB(L,NS)/BAA*ISET(L,NS)
  220     CONTINUE
          IF(.NOT.(SETYPE(L).GE.2)) GO TO 230
            NSEB(L,NS)=AINT(ERHAB(L,NS)/BAA+.9999)*ISET(L,NS)
  230     CONTINUE
  240   CONTINUE
        IF(.NOT.(SETYPE(L).EQ.1)) GO TO 250
          NSED(L)=ERHAD(L)/DAA*ISETD(L)
  250   CONTINUE
        IF(.NOT.(SETYPE(L).GE.2)) GO TO 260
          NSED(L)=AINT(ERHAD(L)/DAA+.9999)*ISETD(L)
  260   CONTINUE
  270 CONTINUE
      DO 430 IXXX1=1,MXI
        I=INO(IXXX1)
        DO 280 IXXX2=1,MXL
```

```
        L=SEINO(IXXX2)
        T2(I,L)=0.
        T4(I,L)=0.
280   CONTINUE
      NXXX1=NRM(I)
      IF(.NOT.(NXXX1.GT.0)) GO TO 360
        DO 350 NS=1,MXNS
          DO 330 IRMT=1,MXIRMT
            IF(.NOT.(IRMT.LE.NXXX1)) GO TO 340
            IF(.NOT.(IRMIN(I,IRMT).EQ.RMI(I,NS))) GO TO 320
              NXXX2=NJA(I,IRMT)
              IF(.NOT.(NXXX2.GT.0)) GO TO 310
                DO 290 LT=1,MXLT
                  IF(.NOT.(LT.LE.NXXX2)) GO TO 300
                  L=A(I,IRMT,LT)
                  T1=ERHBI(I,NS)*TNB(NS)*(QSA(I,IRMT,LT)-AINT(QSA(I,
     +              IRMT,LT)/100.)*100.)
                  TERHB(L)=TERHB(L)+T1
                  T2(I,L)=T2(I,L)+T1
290             CONTINUE
300             CONTINUE
310           CONTINUE
320         CONTINUE
330       CONTINUE
340       CONTINUE
350     CONTINUE
360   CONTINUE
      DO 410 IRMT=1,MXIRMT
        IF(.NOT.(IRMT.LE.NXXX1)) GO TO 420
        IF(.NOT.(IRMIN(I,IRMT).EQ.1)) GO TO 400
          NXXX2=NJA(I,IRMT)
          IF(.NOT.(NXXX2.GT.0)) GO TO 390
            DO 370 LT=1,MXLT
              IF(.NOT.(LT.LE.NXXX2)) GO TO 380
              L=A(I,IRMT,LT)
              T3=ERHD(I)*(QSA(I,IRMT,LT)-AINT(QSA(I,IRMT,LT)/100.)*
     +          100.)
              TERHD(L)=TERHD(L)+T3
              T4(I,L)=T4(I,L)+T3
370         CONTINUE
380         CONTINUE
390       CONTINUE
400     CONTINUE
410   CONTINUE
420   CONTINUE
430 CONTINUE
    DO 470 IXXX1=1,MXL
```

```
      L=SEINO(IXXX1)
      SECD(L)=NSED(L)*CSE(L)*(1.+PIUP*MSE(L))
      TEM01=0.
      DO 440 NS=1,MXNS
        TEM01=TEM01+NSEB(L,NS)*TNB(NS)
  440 CONTINUE
      SECB(L)=TEM01*CSE(L)*(1.+PIUP*MSE(L))
      PBDV(L)=0.
      PDDV(L)=0.
      TEM02=0.
      DO 450 NS=1,MXNS
        TEM02=TEM02+ERHAB(L,NS)
  450 CONTINUE
      ERHA(L)=TEM02+ERHAD(L)
      SEDV(L)=U(ERHA(L))*SEDEV(L)
      IF(.NOT.(TERHB(L).GT.0.000001.OR.TERHD(L).GT.
     +   0.000001)) GO TO 460
        PBDV(L)=TERHB(L)*SEDV(L)/(TERHB(L)+TERHD(L))
        PDDV(L)=TERHD(L)*SEDV(L)/(TERHB(L)+TERHD(L))
  460 CONTINUE
  470 CONTINUE
      DO 510 IXXX1=1,MXI
        I=INO(IXXX1)
        SECI(I)=UCTDC(I)
        DO 500 IXXX2=1,MXL
          L=SEINO(IXXX2)
          IF(.NOT.(TERHB(L).GT.0.000001)) GO TO 480
            SECI(I)=SECI(I)+(SECB(L)+PBDV(L))*T2(I,L)/TERHB(L)
  480     CONTINUE
          IF(.NOT.(TERHD(L).GT.0.000001)) GO TO 490
            SECI(I)=SECI(I)+(SECD(L)+PDDV(L))*T4(I,L)/TERHD(L)
  490     CONTINUE
  500   CONTINUE
  510 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE ZPMEQ
C                                                          810625 085111682
C*****************************************************************************
C*  COMPUTES PRIME MISSION EQUIPMENT QUANTITIES                              *
C*  FOR EACH LRU ITEM                                                        *
C*  ATU MOD SLR - 15 MAY 80                                                  *
C*****************************************************************************
C
      COMMON /I/ I
      COMMON /INO/ INO(150)
      COMMON /LRU/ LRU(150)
      COMMON /MXI/ MXI
      COMMON /MXNP/ MXNP
      COMMON /MXNS/ MXNS
      COMMON /NITEM/ NITEM(150,5)
      REAL NITEM
      COMMON /NP/ NP
      COMMON /NPLT/ NPLT(5,10)
      REAL NPLT
      COMMON /NS/ NS
      COMMON /PMEQ/ PMEQ(150)
      COMMON /TNB/ TNB(10)
C
C
      DO 230 IXXX1=1,MXI
        I=INO(IXXX1)
        TEM02=0.
        DO 220 NS=1,MXNS
          TEM01=0.
          DO 210 NP=1,MXNP
            TEM01=TEM01+NPLT(NP,NS)*NITEM(I,NP)
  210     CONTINUE
          TEM02=TEM02+TEM01*TNB(NS)
  220   CONTINUE
        PMEQ(I)=TEM02*FLOAT(LRU(I))
  230 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE ZTISQ
C                                                          810625 085113777
C*****************************************************************************
C*  COMPUTES TOTAL INVESTMENT SPARES QUANTITY                                *
C*  FOR AN ITEM OF TYPE I                                                    *
C*  ATU MOD SLR - 15 MAY 80                                                  *
C*****************************************************************************
C
      COMMON /DS/ DS(150)
      COMMON /I/ I
      COMMON /INO/ INO(150)
      COMMON /MXI/ MXI
      COMMON /MXNS/ MXNS
      COMMON /NFB/ NFB(150,10)
      REAL NFB
      COMMON /NFD/ NFD(150)
      REAL NFD
      COMMON /NS/ NS
      COMMON /TISQ/ TISQ(150)
      COMMON /TNB/ TNB(10)
C
C
      DO 220 IXXX1=1,MXI
        I=INO(IXXX1)
        TISQ(I)=0.
        DS(I)=F(NFD(I))
        DO 210 NS=1,MXNS
          BBS=F(NFB(I,NS))
          TISQ(I)=TISQ(I)+(TNB(NS)*BBS)
  210   CONTINUE
        TISQ(I)=TISQ(I)+DS(I)
  220 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE ZYRSQ
C                                                          810625 085118821
C*****************************************************************************
C*  COMPUTES YEARLY REPLACEMENT SPARES QUANTITY                              *
C*  DUE TO AN INDIVIDUAL ITEM TYPE I                                         *
C*  ATU MOD SLR - 15 MAY 80                                                  *
C*****************************************************************************
C
      COMMON /COND/ COND(150)
      COMMON /FAIL/ FAIL(150,10)
      COMMON /I/ I
      COMMON /INO/ INO(150)
      COMMON /MXI/ MXI
      COMMON /MXNS/ MXNS
      COMMON /NHI/ NHI(150)
      COMMON /NS/ NS
      COMMON /TNB/ TNB(10)
      COMMON /YRSQ/ YRSQ(150)
C
C
      DO 230 IXXX1=1,MXI
        I=INO(IXXX1)
        CD=0.
        IF(.NOT.(NHI(I).GT.0)) GO TO 210
          CD=COND(NHI(I))
  210   CONTINUE
        TEM01=0.
        DO 220 NS=1,MXNS
          TEM01=TEM01+FAIL(I,NS)*TNB(NS)
  220   CONTINUE
        YRSQ(I)=12.*TEM01*(1.-COND(NHI(I)))*COND(I)
  230 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE ZTOTPQ
C                                                          810625 085121658
C*****************************************************************************
C*  COMPUTES THE TOTAL QUANTITIES OF                                         *
C*  EACH ITEM TO BE PROCURED                                                 *
C*  ATU MOD SLR - 15 MAY 80                                                  *
C*****************************************************************************
C
      COMMON /I/ I
      COMMON /INO/ INO(150)
      COMMON /MXI/ MXI
      COMMON /NRUC/ NRUC
      REAL NRUC
      COMMON /PMEQ/ PMEQ(150)
      COMMON /TISQ/ TISQ(150)
      COMMON /TOTPQ/ TOTPQ(150)
      COMMON /YRSQ/ YRSQ(150)
C
C
      DO 210 IXXX1=1,MXI
        I=INO(IXXX1)
        TOTPQ(I)=PMEQ(I)+TISQ(I)+NRUC*YRSQ(I)
  210 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE ZLC
C                                                          810625 085122779
C*****************************************************************************
C*  LEARNING CURVE EFFECTS FOR ALL ITEMS OF TYPE I                           *
C*  ATU MOD SLR - 15 MAY 80                                                  *
C*****************************************************************************
C
      COMMON /I/ I
      COMMON /INO/ INO(150)
      COMMON /LC/ LC(150)
      REAL LC
      COMMON /MXI/ MXI
C
C
      DO 210 IXXX1=1,MXI
        I=INO(IXXX1)
        LC(I)=XLEARN(I)
  210 CONTINUE
C
      RETURN
      END
```

```
      FUNCTION U(X)                                          810625 085126416
C
C
C
      U=0.
      IF(.NOT.(X.GT..000001)) GO TO 210
        U=1.
  210 CONTINUE
C
      RETURN
      END
```

```
      FUNCTION F(X)
C                                                          810625 085128143
      COMMON /BF/ BF
C
C
      F=0.
      IF(.NOT.(X.GT..000001)) GO TO 210
        F=X+BF*SQRT(X)
  210 CONTINUE
C
      RETURN
      END
```

```
      FUNCTION XLEARN(I)
C                                                          810625 085129597
C*************************************************************************
C*  LEARNING EFFECTS IN EQUATIONS                                        *
C*  ATU MOD SLR - 20 MAY 80                                              *
C*************************************************************************
C
      COMMON /LFAC/ LFAC(150)
      REAL LFAC
      COMMON /TOTPQ/ TOTPQ(150)
      COMMON /XITEMQ/ XITEMQ(150)
      REAL N
C
C
      XLEARN=1.
      BI=ALOG10(LFAC(I))/ALOG10(2.)
      N=TOTPQ(I)+XITEMQ(I)
      IF(.NOT.(N.GT.1.0)) GO TO 210
        XLEARN=1./N*(1./(BI+1.)*(N**(BI+1.)-1.)+.5*(N**BI+1.)+BI/12.*(N*
     +    *(BI-1.)-1.))
  210 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE COST1
C                                                          810625 085131754
C*****************************************************************************
C*  COMPUTES PRODUCTION COST ELEMENT-PRODC                                   *
C*  ATU MOD SLR - 20 MAY 80                                                  *
C*****************************************************************************
C
      COMMON /HDWRIT/ HDWRIT(150,5)
      COMMON /HDWRT/ HDWRT(5)
      COMMON /I/ I
      COMMON /INO/ INO(150)
      COMMON /INTNR/ INTNR(5)
      REAL INTNR
      COMMON /INTR/ INTR(5)
      REAL INTR
      COMMON /LC/ LC(150)
      REAL LC
      COMMON /LRU/ LRU(150)
      COMMON /LUP/ LUP(150)
      REAL LUP
      COMMON /MXI/ MXI
      COMMON /MXNP/ MXNP
      COMMON /MXNS/ MXNS
      COMMON /NITEM/ NITEM(150,5)
      REAL NITEM
      COMMON /NP/ NP
      COMMON /NPLT/ NPLT(5,10)
      REAL NPLT
      COMMON /NS/ NS
      COMMON /PRODC/ PRODC
      COMMON /TERMC/ TERMC(5)
      COMMON /TERMH/ TERMH
      COMMON /TERMI/ TERMI
      COMMON /TNB/ TNB(10)
      COMMON /TOTT/ TOTT(5)
      COMMON /UP/ UP(150)
      COMMON /XUC/ XUC
C
C
      DO 240 NP=1,MXNP
        HDWRT(NP)=0.
        DO 220 IXXX2=1,MXI
          I=INO(IXXX2)
          LUP(I)=UP(I)*LC(I)
          HDWRIT(I,NP)=NITEM(I,NP)*LUP(I)*XUC
          IF(.NOT.(LRU(I).EQ.1)) GO TO 210
            HDWRT(NP)=HDWRT(NP)+HDWRIT(I,NP)
```

```
  210      CONTINUE
  220    CONTINUE
         TEM01=0.
         DO 230 NS=1,MXNS
           TEM01=TEM01+TNB(NS)*NPLT(NP,NS)
  230    CONTINUE
         TOTT(NP)=TEM01
         TERMC(NP)=(INTNR(NP)/TOTT(NP))+INTR(NP)+HDWRT(NP)
         TERMH=TERMH+(TOTT(NP)*HDWRT(NP))
         TERMI=TERMI+(TOTT(NP)*INTR(NP))+INTNR(NP)
  240 CONTINUE
      PRODC=TERMH+TERMI
C
      RETURN
      END
```

```
      SUBROUTINE COST2
C                                                                  810625 085139201
C*****************************************************************************
C*  COMPUTES MODIFICATION/INSTALLATION                                       *
C*  COST ELEMENT-MIC                                                         *
C*****************************************************************************
C
      COMMON /AKIT/ AKIT(4,5)
      COMMON /FR/ FR(3,5)
      COMMON /IA/ IA
      COMMON /IMICA/ IMICA(5)
      REAL IMICA
      COMMON /M/ M
      COMMON /MIC/ MIC
      REAL MIC
      COMMON /MIFIX/ MIFIX(3,5)
      REAL MIFIX
      COMMON /MILR/ MILR(3)
      REAL MILR
      COMMON /MIMH/ MIMH(4,3,5)
      REAL MIMH
      COMMON /MXM/ MXM
      COMMON /MXNP/ MXNP
      COMMON /MXNS/ MXNS
      COMMON /NIA/ NIA
      COMMON /NP/ NP
      COMMON /NPLT/ NPLT(5,10)
      REAL NPLT
      COMMON /NRMI/ NRMI(5)
      REAL NRMI
      COMMON /NS/ NS
      COMMON /PDIV/ PDIV(5)
      COMMON /RMICA/ RMICA(5)
      COMMON /TNB/ TNB(10)
      COMMON /XMIL/ XMIL
      REAL IMIC
C
C
C
C.....FIRST COMPUTE NON-RECURRING MOD/INSTALL COST
      IMIC=0.
      RMIC=0.
      DO 240 NP=1,MXNP
        IMICA(NP)=PDIV(NP)*NRMI(NP)
        IMIC=IMIC+IMICA(NP)
C
C. ... .NEXT COMPUTE RECURRING MOD/INSTALL COST
```

```
        TEM02=0.
        DO 220 M=1,MXM
          TEM01=0.
          DO 210 IA=1,NIA
            TEM01=TEM01+MIMH(IA,M,NP)*XMIL*MILR(M)+AKIT(IA,NP)
  210     CONTINUE
          TEM02=TEM02+FR(M,NP)*((MIFIX(M,NP)*1000.)+TEM01)
  220   CONTINUE
        RMICA(NP)=TEM02
        TEM03=0.
        DO 230 NS=1,MXNS
          TEM03=TEM03+TNB(NS)*NPLT(NP,NS)*RMICA(NP)
  230   CONTINUE
        RMIC=RMIC+TEM03
  240 CONTINUE
C
C.....TOTAL MOD/INSTALL COST IS THEN:
      MIC=IMIC+RMIC
C
      RETURN
      END
```

```
      SUBROUTINE COST3
C                                                                  810625 085144025
C*****************************************************************************
C*  COMPUTES OPERATIONS COST ELEMENT-OC                                      *
C*****************************************************************************
C
      COMMON /AFC/ AFC
      COMMON /AMPM/ AMPM(5,3)
      COMMON /APFH/ APFH(5,3)
      COMMON /BAFC/ BAFC(6)
      COMMON /BOLC/ BOLC(6)
      COMMON /BPLAT/ BPLAT(10)
      INTEGER BPLAT
      COMMON /BTYPE/ BTYPE(10)
      INTEGER BTYPE
      COMMON /CFG/ CFG(3)
      COMMON /DRAG/ DRAG(5)
      COMMON /FGH/ FGH(5)
      COMMON /K/ K(5)
      REAL K
      COMMON /LO/ LO(10)
      COMMON /MMPD/ MMPD(5,3)
      REAL MMPD
      COMMON /MMPM/ MMPM(5)
      REAL MMPM
      COMMON /MXNP/ MXNP
      COMMON /MXNS/ MXNS
      COMMON /NAE/ NAE(5)
      REAL NAE
      COMMON /NP/ NP
      COMMON /NPLT/ NPLT(5,10)
      REAL NPLT
      COMMON /NS/ NS
      COMMON /OC/ OC
      COMMON /OLC/ OLC
      COMMON /OLCP/ OLCP
      COMMON /OLCT/ OLCT
      COMMON /PIUP/ PIUP
      COMMON /PMLR/ PMLR
      COMMON /THRS/ THRS(5)
      COMMON /TNB/ TNB(10)
      COMMON /TNLR/ TNLR
C
C
C
C.....FIRST COMPUTE OPERATIONAL LABOR COST (OLC)
      DO 230 NS=1,MXNS
```

```
          TEMO1=0.
          DO 210 NP=1,MXNP
            TEMO1=TEMO1+NPLT(NP,NS)*TNB(NS)*MMPD(NP,LO(NS))
  210     CONTINUE
          DS1=TEMO1*365.*PIUP*TNLR/60.
          TEMO2=0.
          DO 220 NP=1,MXNP
            TEMO2=TEMO2+NPLT(NP,NS)*TNB(NS)*MMPM(NP)*AMPM(NP,LO(NS))
  220     CONTINUE
          DS2=TEMO2*12.*PIUP*PMLR/60.
          OLCT=OLCT+DS1
          OLCP=OLCP+DS2
          BOLC(BTYPE(NS))=BOLC(BTYPE(NS))+DS1+DS2
          IB=5+BPLAT(NS)
          BOLC(IB)=BOLC(IB)+DS1+DS2
  230   CONTINUE
        OLC=OLCT+OLCP
C
C.....NEXT COMPUTE ADDED FUEL COST (AFC)
        DO 250 NS=1,MXNS
          TEMO3=0.
          DO 240 NP=1,MXNP
            IF(.NOT.(K(NP).GT.0.0001.AND.THRS(NP).GT.0.0001)) GO TO 240
            TEMO3=TEMO3+NPLT(NP,NS)*TNB(NS)*APFH(NP,LO(NS))*FGH(NP)*
     +        CFG(LO(NS))*NAE(NP)*DRAG(NP)/(K(NP)*THRS(NP))
  240     CONTINUE
          DS3=TEMO3*12.*PIUP
          AFC=AFC+DS3
          BAFC(BTYPE(NS))=BAFC(BTYPE(NS))+DS3
          IB=5+BPLAT(NS)
          BAFC(IB)=BAFC(IB)+DS3
  250   CONTINUE
C
C.....TOTAL OPERATIONS COST (OC)
        OC=OLC+AFC
C
        RETURN
        END
```

```
      SUBROUTINE COST4
C                                                          810625 085151819
C*****************************************************************************
C*  COMPUTES INVESTMENT SPARES COST ELEMENT-ISC                              *
C*  ATU MOD SLR - 20 MAY 80                                                  *
C*****************************************************************************
C
      COMMON /BISC/ BISC(6)
      COMMON /BPLAT/ BPLAT(10)
      INTEGER BPLAT
      COMMON /BS/ BS(150)
      COMMON /BTYPE/ BTYPE(10)
      INTEGER BTYPE
      COMMON /DS/ DS(150)
      COMMON /I/ I
      COMMON /INO/ INO(150)
      COMMON /ISC/ ISC
      REAL ISC
      COMMON /ISCA/ ISCA(150)
      REAL ISCA
      COMMON /ISCB/ ISCB
      REAL ISCB
      COMMON /ISCD/ ISCD
      REAL ISCD
      COMMON /LC/ LC(150)
      REAL LC
      COMMON /MXI/ MXI
      COMMON /MXNS/ MXNS
      COMMON /NFB/ NFB(150,10)
      REAL NFB
      COMMON /NFD/ NFD(150)
      REAL NFD
      COMMON /NS/ NS
      COMMON /TISQ/ TISQ(150)
      COMMON /TNB/ TNB(10)
      COMMON /UP/ UP(150)
      COMMON /XUC/ XUC
C
C
      DO 220 IXXX1=1,MXI
        I=INO(IXXX1)
        ISCA(I)=TISQ(I)*UP(I)*LC(I)*XUC
        DO 210 NS=1,MXNS
          BBSP=TNB(NS)*F(NFB(I,NS))
          BS(I)=BS(I)+BBSP
          BSPC=BBSP*UP(I)*XUC*LC(I)
          BISC(BTYPE(NS))=BISC(BTYPE(NS))+BSPC
```

```
          IB=3+BPLAT(NS)
          BISC(IB)=BISC(IB)+BSPC
          ISCB=ISCB+BSPC
  210   CONTINUE
        DS(I)=F(NFD(I))
        ISCD=ISCD+DS(I)*UP(I)*XUC*LC(I)
  220 CONTINUE
      TEMO1=0.
      DO 230 IXXX1=1,MXI
        I=INO(IXXX1)
        TEMO1=TEMO1+ISCA(I)
  230 CONTINUE
      ISC=TEMO1
C
      RETURN
      END
```

```
      SUBROUTINE COST5
C                                                          810625 085156325
C*****************************************************************************
C*  COMPUTES REPLACEMENT SPARES COST ELEMENT-RSC                            *
C*  ATU MOD SLR - 20 MAY 80                                                 *
C*****************************************************************************
C
      COMMON /BPLAT/ BPLAT(10)
      INTEGER BPLAT
      COMMON /BRSC/ BRSC(6)
      COMMON /BTYPE/ BTYPE(10)
      INTEGER BTYPE
      COMMON /COND/ COND(150)
      COMMON /FAIL/ FAIL(150,10)
      COMMON /I/ I
      COMMON /INO/ INO(150)
      COMMON /LC/ LC(150)
      REAL LC
      COMMON /LRU/ LRU(150)
      COMMON /MXI/ MXI
      COMMON /MXNS/ MXNS
      COMMON /NHI/ NHI(150)
      COMMON /NRUC/ NRUC
      REAL NRUC
      COMMON /NS/ NS
      COMMON /PIUP/ PIUP
      COMMON /RM/ RM(150)
      COMMON /RSC/ RSC
      COMMON /RSCA/ RSCA(150)
      COMMON /TNB/ TNB(10)
      COMMON /UP/ UP(150)
      COMMON /XUC/ XUC
C
C
      DO 240 IXXX1=1,MXI
        I=INO(IXXX1)
        TEM01=0.
        DO 210 NS=1,MXNS
          TEM01=TEM01+FAIL(I,NS)*TNB(NS)
  210   CONTINUE
        TEMP=12.*TEM01*(1.-COND(NHI(I)))
        RSCA(I)=TEMP*((NRUC*LC(I)+(PIUP-NRUC))*COND(I)+PIUP*(1.-COND(I))
     +    *RM(I))*UP(I)*XUC
        CD=0.
        IF(.NOT.(LRU(I).EQ.0)) GO TO 220
          CD=COND(NHI(I))
  220   CONTINUE
```

```
        DO 230 NS=1,MXNS
          TFL=TNB(NS)*FAIL(I,NS)
          BSPC=12.*TFL*(1.-CD)*(COND(I)+(1.-COND(I))*RM(I))*UP(I)*XUC*
     +      (NRUC*LC(I)+(PIUP-NRUC))
          BRSC(BTYPE(NS))=BRSC(BTYPE(NS))+BSPC
          IB=3+BPLAT(NS)
          BRSC(IB)=BRSC(IB)+BSPC
  230   CONTINUE
        RSC=RSC+RSCA(I)
  240 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE COST6
C                                                          810625 085200197
C*****************************************************************************
C*  COMPUTES ON-EQUIPMENT MAINTENANCE                                        *
C*  COST ELEMENT-ONMC                                                        *
C*****************************************************************************
C
      COMMON /APFH/ APFH(5,3)
      COMMON /BLR/ BLR
      COMMON /BMF/ BMF
      COMMON /BONMC/ BONMC(6)
      COMMON /BPLAT/ BPLAT(10)
      INTEGER BPLAT
      COMMON /BTYPE/ BTYPE(10)
      INTEGER BTYPE
      COMMON /FAIL/ FAIL(150,10)
      COMMON /FPR/ FPR(150)
      COMMON /I/ I
      COMMON /INO/ INO(150)
      COMMON /IPCF/ IPCF(150)
      REAL IPCF
      COMMON /KFAC/ KFAC(4)
      REAL KFAC
      COMMON /LE/ LE(5)
      COMMON /LO/ LO(10)
      COMMON /LRU/ LRU(150)
      COMMON /MTBMI/ MTBMI(150,4)
      REAL MTBMI
      COMMON /MXI/ MXI
      COMMON /MXNP/ MXNP
      COMMON /MXNS/ MXNS
      COMMON /NITEM/ NITEM(150,5)
      REAL NITEM
      COMMON /NP/ NP
      COMMON /NPLT/ NPLT(5,10)
      REAL NPLT
      COMMON /NS/ NS
      COMMON /ONMC/ ONMC
      COMMON /ONMCA/ ONMCA(150)
      COMMON /PIUP/ PIUP
      COMMON /RIP/ RIP(150)
      COMMON /RMH/ RMH(150)
      COMMON /TFAC/ TFAC(5)
      COMMON /TNB/ TNB(10)
      COMMON /XFPR/ XFPR
      COMMON /XFR/ XFR
C
```

```
C
      DO 250 IXXX1=1,MXI
        I=INO(IXXX1)
        IF(.NOT.(LRU(I).EQ.1)) GO TO 250
        DO 240 NS=1,MXNS
          TFL=TNB(NS)*FAIL(I,NS)
          DS1=12.*PIUP*TFL*(1.+XFPR*FPR(I))*RMH(I)*BMF*BLR
          IF(.NOT.(RIP(I).LT..999)) GO TO 210
            DS2=12.*PIUP*TFL*RIP(I)*IPCF(I)*BMF/(1.-RIP(I))
  210     CONTINUE
C
C.....IF RIP(I)=1 COMPUTE NO. OF NON-REMOVED FAILURES
          IF(.NOT.(RIP(I).GE..999)) GO TO 230
            TEM01=0.
            DO 220 NP=1,MXNP
              IF(.NOT.(NITEM(I,NP).GT..001)) GO TO 220
              TEM01=TEM01+NITEM(I,NP)*TFAC(NP)*KFAC(LE(NP))/MTBMI(I,
     +          LE(NP))*NPLT(NP,NS)*APFH(NP,LO(NS))
  220       CONTINUE
            TFL=XFR*TEM01*TNB(NS)
            DS2=12.*PIUP*TFL*IPCF(I)*BMF
  230     CONTINUE
          ONMCA(I)=ONMCA(I)+DS1+DS2
          BONMC(BTYPE(NS))=BONMC(BTYPE(NS))+DS1+DS2
          IB=3+BPLAT(NS)
          BONMC(IB)=BONMC(IB)+DS1+DS2
  240   CONTINUE
        ONMC=ONMC+ONMCA(I)
  250 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE COST7
C                                                          810625 085211880
C*****************************************************************************
C*  COMPUTES OFF-EQUIPMENT MAINTENANCE                                       *
C*  COST ELEMENT-OFMC                                                        *
C*****************************************************************************
C
      COMMON /BCMH/ BCMH(150)
      COMMON /BLR/ BLR
      COMMON /BMF/ BMF
      COMMON /BMH/ BMH(150)
      COMMON /BOFMC/ BOFMC(6)
      COMMON /BPLAT/ BPLAT(10)
      INTEGER BPLAT
      COMMON /BTYPE/ BTYPE(10)
      INTEGER BTYPE
      COMMON /COND/ COND(150)
      COMMON /CPPC/ CPPC
      COMMON /CPPD/ CPPD(3)
      COMMON /DLR/ DLR
      COMMON /DMF/ DMF
      COMMON /DMH/ DMH(150)
      COMMON /FAIL/ FAIL(150,10)
      COMMON /FPR/ FPR(150)
      COMMON /I/ I
      COMMON /INO/ INO(150)
      COMMON /LO/ LO(10)
      COMMON /LRU/ LRU(150)
      COMMON /MRF/ MRF
      REAL MRF
      COMMON /MRO/ MRO
      REAL MRO
      COMMON /MXI/ MXI
      COMMON /MXNS/ MXNS
      COMMON /NHB/ NHB(10)
      COMMON /NHI/ NHI(150)
      COMMON /NRTS/ NRTS(150)
      REAL NRTS
      COMMON /NS/ NS
      COMMON /OFMC/ OFMC
      COMMON /OFMCA/ OFMCA(150)
      COMMON /OFMCB/ OFMCB
      COMMON /OFMCD/ OFMCD
      COMMON /PIUP/ PIUP
      COMMON /RIP/ RIP(150)
      COMMON /RTS/ RTS(150)
      COMMON /SR/ SR
```

```
      COMMON /TCFB/ TCFB
      COMMON /TCFD/ TCFD
      COMMON /TNB/ TNB(10)
      COMMON /TR/ TR
      COMMON /WT/ WT(150)
      COMMON /XFPR/ XFPR
      REAL NHNRT
      REAL NHRT
C
C
      DO 260 IXXX1=1,MXI
        I=INO(IXXX1)
        NHRT=0.
        NHNRT=0.
        IF(.NOT.(LRU(I).EQ.0)) GO TO 210
          NHRT=RTS(NHI(I))
          NHNRT=NRTS(NHI(I))
  210   CONTINUE
        XF=XFPR*FPR(I)
        DO 250 NS=1,MXNS
          SATLRU=0.
          IF(.NOT.(BTYPE(NS).EQ.3.AND.LRU(I).EQ.1)) GO TO 220
            SATLRU=1.
  220     CONTINUE
          ACFB=(FLOAT(LRU(I))+NHRT)*((1.+XF)*BCMH(I)+RTS(I)*BMH(I))*BMF*
     +      BLR+SATLRU*(1.+XF)*2.*CPPC*WT(I)
          T1=1.
          IF(.NOT.(RIP(I).LT.0.999)) GO TO 230
            T1=RIP(I)/(1.-RIP(I))
  230     CONTINUE
          ACFB=ACFB+(T1*MRO+MRF+SR+TR)*BLR
          ACFD=(FLOAT(LRU(I))+NHRT)*(NRTS(I)*DMH(I)*DMF*DLR+(2.*NRTS(I)+
     +      COND(I))*CPPD(LO(NS))*WT(I))+NHNRT*(1.-COND(I))*DMH(I)*DMF*
     +      DLR
          TCFB=12.*PIUP*TNB(NS)*FAIL(I,NS)*ACFB
          TCFD=12.*PIUP*TNB(NS)*FAIL(I,NS)*ACFD
          OFMCA(I)=OFMCA(I)+TCFB+TCFD
          OFMCB=OFMCB+TCFB
          OFMCD=OFMCD+TCFD
          IB=BTYPE(NS)
          IB1=3+BPLAT(NS)
          IF(.NOT.(IB.EQ.3)) GO TO 240
            IB=2
            IB1=3+BPLAT(NHB(NS))
  240     CONTINUE
          BOFMC(IB)=BOFMC(IB)+TCFB
          BOFMC(IB1)=BOFMC(IB1)+TCFB
```

```
  250   CONTINUE
  260 CONTINUE
      OFMC=OFMCB+OFMCD
C
      RETURN
      END
```

```
      SUBROUTINE COST8
C                                                          810625 085224863
C*****************************************************************************
C*  COMPUTES SUPPORT EQUIPMENT COST ELEMENT-SEC                              *
C*  ATU MOD SLR - 27 MAY 80                                                  *
C*****************************************************************************
C
      COMMON /BPLAT/ BPLAT(10)
      INTEGER BPLAT
      COMMON /BSECC/ BSECC(6)
      COMMON /BSECP/ BSECP(6)
      COMMON /BTYPE/ BTYPE(10)
      INTEGER BTYPE
      COMMON /CSE/ CSE(120)
      COMMON /DUM/ DUM
      INTEGER DUM
      COMMON /L/ L
      COMMON /MSE/ MSE(120)
      REAL MSE
      COMMON /MXI/ MXI
      COMMON /MXL/ MXL
      COMMON /MXNS/ MXNS
      COMMON /NS/ NS
      COMMON /NSEB/ NSEB(120,10)
      REAL NSEB
      COMMON /NSED/ NSED(120)
      REAL NSED
      COMMON /PIUP/ PIUP
      COMMON /SECBC/ SECBC
      COMMON /SECBP/ SECBP
      COMMON /SECC/ SECC
      COMMON /SECDC/ SECDC
      COMMON /SECDP/ SECDP
      COMMON /SECIC/ SECIC
      COMMON /SECII/ SECII
      COMMON /SECIP/ SECIP
      COMMON /SECP/ SECP
      COMMON /SECR/ SECR
      COMMON /SECRC/ SECRC
      COMMON /SECRP/ SECRP
      COMMON /SEDC/ SEDC
      COMMON /SEDV/ SEDV(120)
      COMMON /SEINO/ SEINO(120)
      INTEGER SEINO
      COMMON /SEPC/ SEPC
      COMMON /SETYPE/ SETYPE(120)
      INTEGER SETYPE
```

```
      COMMON /TNB/ TNB(10)
      COMMON /TSEC/ TSEC
      COMMON /TUCTDC/ TUCTDC
      INTEGER DUMM
C
C
      DO 220 IXXX1=1,MXL
        L=SEINO(IXXX1)
        TEM01=0.
        DO 210 NS=1,MXNS
          TEM01=TEM01+(NSEB(L,NS)*TNB(NS))
  210   CONTINUE
        SEPC=(TEM01+NSED(L))*CSE(L)*(1.+PIUP*MSE(L))+SEPC
        SEDC=SEDC+SEDV(L)
  220 CONTINUE
      SEDC=SEDC+TUCTDC
      TSEC=SEPC+SEDC
      DO 350 IXXX1=1,MXL
        L=SEINO(IXXX1)
        DO 230 NS=1,MXNS
          TCSEL=NSEB(L,NS)*TNB(NS)*CSE(L)
          SECII=SECII+TCSEL
          SECR=SECR+TCSEL*PIUP*MSE(L)
  230   CONTINUE
        SECR=SECR+NSED(L)*CSE(L)*PIUP*MSE(L)
        TEM02=0.
        DO 240 NS=1,MXNS
          TEM02=TEM02+NSEB(L,NS)*TNB(NS)
  240   CONTINUE
        SUMM=TEM02
        IF(.NOT.(SETYPE(L).NE.3)) GO TO 290
          SECDC=SECDC+NSED(L)*CSE(L)*(1.+PIUP*MSE(L))
          SECIC=SECIC+(SUMM+NSED(L))*CSE(L)
          SECRC=SECRC+(SUMM+NSED(L))*CSE(L)*PIUP*MSE(L)
          DO 260 DUM=1,3
            TEM03=0.
            DO 250 NS=1,MXNS
              IF(.NOT.(BTYPE(NS).EQ.DUM)) GO TO 250
              TEM03=TEM03+NSEB(L,NS)*TNB(NS)
  250       CONTINUE
            BSECC(DUM)=BSECC(DUM)+(TEM03)*CSE(L)*(1.+PIUP*MSE(L))
  260     CONTINUE
          DO 280 DUM=4,6
            DUMM=DUM-3
            TEM04=0.
            DO 270 NS=1,MXNS
              IF(.NOT.(BPLAT(NS).EQ.DUMM)) GO TO 270
```

```
            TEM04=TEM04+NSEB(L,NS)*TNB(NS)
270         CONTINUE
            BSECC(DUM)=BSECC(DUM)+(TEM04)*CSE(L)*(1.+PIUP*MSE(L))
280       CONTINUE
290     CONTINUE
        IF(.NOT.(SETYPE(L).EQ.3)) GO TO 340
          SECIP=SECIP+(SUMM+NSED(L))*CSE(L)
          SECRP=SECRP+(SUMM+NSED(L))*CSE(L)*PIUP*MSE(L)
          SECDP=SECDP+(NSED(L)*CSE(L)*(1.+PIUP*MSE(L)))
          DO 310 DUM=1,3
            TEM05=0.
            DO 300 NS=1,MXNS
              IF(.NOT.(BTYPE(NS).EQ.DUM)) GO TO 300
              TEM05=TEM05+NSEB(L,NS)*TNB(NS)
300         CONTINUE
            BSECP(DUM)=BSECP(DUM)+TEM05*CSE(L)*(1.+PIUP*MSE(L))
310       CONTINUE
          DO 330 DUM=4,5
            DUMM=DUM-3
            TEM06=0.
            DO 320 NS=1,MXNS
              IF(.NOT.(BPLAT(NS).EQ.DUMM)) GO TO 320
              TEM06=TEM06+NSEB(L,NS)*TNB(NS)
320         CONTINUE
            BSECP(DUM)=BSECP(DUM)+(TEM06)*CSE(L)*(1.+PIUP*MSE(L))
330       CONTINUE
340     CONTINUE
350   CONTINUE
      TEM07=0.
      DO 360 DUM=1,3
        TEM07=TEM07+BSECC(DUM)
360   CONTINUE
      SECBC=TEM07
      TEM08=0.
      DO 370 DUM=1,3
        TEM08=TEM08+BSECP(DUM)
370   CONTINUE
      SECBP=TEM08
      SECII=SECII+SEDC
      SECC=SECIC+SECRC
      SECP=SECIP+SECRP
C
      RETURN
      END
```

```
      SUBROUTINE COST9
C                                                          810625 085237027
C*****************************************************************************
C*  COMPUTES ITEM INVENTORY MANAGEMENT                                       *
C*  COST ELEMENT-IIMC                                                        *
C*****************************************************************************
C
      COMMON /BIIMC/ BIIMC(6)
      COMMON /BPLAT/ BPLAT(10)
      INTEGER BPLAT
      COMMON /BTYPE/ BTYPE(10)
      INTEGER BTYPE
      COMMON /COND/ COND(150)
      COMMON /FAIL/ FAIL(150,10)
      COMMON /I/ I
      COMMON /IIMC/ IIMC
      REAL IIMC
      COMMON /IIMCA/ IIMCA(150)
      REAL IIMCA
      COMMON /IIMCB/ IIMCB
      REAL IIMCB
      COMMON /IIMCD/ IIMCD
      REAL IIMCD
      COMMON /IIMCI/ IIMCI
      REAL IIMCI
      COMMON /IIMCR/ IIMCR
      REAL IIMCR
      COMMON /IMC/ IMC
      REAL IMC
      COMMON /INO/ INO(150)
      COMMON /LRU/ LRU(150)
      COMMON /MXI/ MXI
      COMMON /MXNS/ MXNS
      COMMON /NFB/ NFB(150,10)
      REAL NFB
      COMMON /NHI/ NHI(150)
      COMMON /NS/ NS
      COMMON /PA/ PA(150)
      COMMON /PIUP/ PIUP
      COMMON /RMC/ RMC
      COMMON /RTS/ RTS(150)
      COMMON /SA/ SA
      COMMON /SAT/ SAT(10)
      COMMON /TNB/ TNB(10)
      REAL IUT
      REAL NHCD
C
```

```
C
      DO 240 IXXX1=1,MXI
        I=IND(IXXX1)
        TEMO1=0.
        DO 210 NS=1,MXNS
          TEMO1=TEMO1+FAIL(I,NS)
  210   CONTINUE
        IUT=IEMO1
        IUT=U(IUT)
        NHCD=0.
        IF (NOT.LRCT.EQ.0) GO TO 220
          NHCD=COND(NHCD)
  220   CONTINUE
        CPA=PA(I)*(1.-COND(I))
        DO 230 NS=1,MXNS
          BIS=AMIN(FNFB(I,NS),1.)*TNB(NS)
          BCIS=(1.-SAT(NS))*U(RTS(I)*NFB(I,NS))*TNB(NS)
          CB=PIUP*(BIS+BCIS*CPA)*SA
          IIMCA(I)=IIMCA(I)+CB
          IIMCB=IIMCB+CB
          BIIMC(BTYPE(NS))=BIIMC(BTYPE(NS))+CB
          IB=3+BPLAT(NS)
          BIIMC(IB)=BIIMC(IB)+CB
          IIMCR=IIMCR+CB
  230   CONTINUE
        CD=IUT*(1.-CPA)*U(1.-NHCD)*(IMC+PIUP*RMC)
        IIMCA(I)=IIMCA(I)+CD
        IIMCD=IIMCD+CD
        IIMCI=IIMCI+IUT*(1.+CPA)*U(1.-NHCD)*IMC
        IIMCR=IIMCR+IUT*(1.+CPA)*U(1.-NHCD)*PIUP*RMC
  240 CONTINUE
      IIMC=IIMCB+IIMCD
C
      RETURN
      END
```

```
      SUBROUTINE COST10
C                                                          810625 085249437
C*****************************************************************************
C*  CALCULATES TECH ORDER COST - STDC                                        *
C*  ATU MOD SLK - 28 MAY 80                                                  *
C*****************************************************************************
C
      COMMON /A/ A(150,4,3)
      INTEGER A
      COMMON /ACPP/ ACPP
      COMMON /BDATA/ BDATA
      INTEGER BDATA
      COMMON /BTDC/ BTDC(10)
      COMMON /BTYPE/ BTYPE(10)
      INTEGER BTYPE
      COMMON /DATAB/ DATAB(150)
      INTEGER DATAB
      COMMON /DATAD/ DATAD(150)
      INTEGER DATAD
      COMMON /DATAS/ DATAS(120)
      INTEGER DATAS
      COMMON /DDATA/ DDATA
      INTEGER DDATA
      COMMON /EBCBI/ EBCBI(150,10)
      COMMON /ERHAB/ ERHAB(120,10)
      COMMON /ERHAD/ ERHAD(120)
      COMMON /ERHD/ ERHD(150)
      COMMON /ERTBI/ ERTBI(150,10)
      COMMON /I/ I
      COMMON /INO/ INO(150)
      COMMON /IRMIN/ IRMIN(150,4)
      COMMON /IRMT/ IRMT
      COMMON /L/ L
      COMMON /LT/ LT
      COMMON /MXI/ MXI
      COMMON /MXIRMT/ MXIRMT
      COMMON /MXL/ MXL
      COMMON /MXLT/ MXLT
      COMMON /MXNS/ MXNS
      COMMON /NJA/ NJA(150,4)
      COMMON /NRM/ NRM(150)
      COMMON /NS/ NS
      COMMON /NSEB/ NSEB(120,10)
      REAL NSEB
      COMMON /NSED/ NSED(120)
      REAL NSED
      COMMON /OFMC/ OFMC
```

```
      COMMON /OFMCA/ OFMCA(150)
      COMMON /ONMC/ ONMC
      COMMON /ONMCA/ ONMCA(150)
      COMMON /PIUP/ PIUP
      COMMON /PPSE/ PPSE(150,120)
      COMMON /QSA/ QSA(150,4,3)
      COMMON /RCPP/ RCPP
      COMMON /RMI/ RMI(150,10)
      INTEGER RMI
      COMMON /SEINO/ SEINO(120)
      INTEGER SEINO
      COMMON /SETDC/ SETDC(120)
      COMMON /STDC/ STDC
      COMMON /STDCI/ STDCI
      COMMON /STDCS/ STDCS
      COMMON /TD/ TDC(150)
      COMMON /TNB/ TNB(10)
      COMMON /TNSE/ TNSE(120)
      COMMON /UCPP/ UCPP
      INTEGER SECD1
      DIMENSION SECODE(120)
      DIMENSION SUM(120)
      DIMENSION TERHAB(120)
      DIMENSION TQSA(120)
C
C
      SUM3=0.
      SUM2=0.
      TERM2=0.
      DO 250 IXXX1=1,MXL
        L=SEINO(IXXX1)
        TEM01=0.
        DO 210 NS=1,MXNS
          IF(.NOT.(BTYPE(NS).EQ.1)) GO TO 210
          TEM01=TEM01+TNB(NS)*NSEB(L,NS)
  210   CONTINUE
        T1=TEM01
        TEM02=0.
        DO 220 NS=1,MXNS
          IF(.NOT.(BTYPE(NS).EQ.2)) GO TO 220
          TEM02=TEM02+TNB(NS)*NSEB(L,NS)
  220   CONTINUE
        T2=TEM02
        T7=T1+T2+NSED(L)
        TEM03=0.
        DO 230 NS=1,MXNS
          TEM03=TEM03+NSEB(L,NS)
```

```
  230    CONTINUE
         TNSE(L)=TEM03+NSED(L)
         SUM3=SUM3+U(TNSE(L))*FLOAT(DATAS(L))
         TEM04=0.
         DO 240 NS=1,MXNS
           TEM04=TEM04+TNB(NS)*U(NSEB(L,NS))
  240    CONTINUE
         SETDC(L)=U(T7)*FLOAT(DATAS(L))*(ACPP+RCPP+(PIUP-1.)*UCPP)+RCPP*
     +     TEM04*FLOAT(DATAS(L))
  250  CONTINUE
       DO 260 IXXX1=1,MXI
         I=INO(IXXX1)
         SUM2=SUM2+(FLOAT(DATAD(I))+FLOAT(DATAB(I)))
  260  CONTINUE
       TERM1=(FLOAT(DDATA+BDATA)+SUM2+SUM3)*(ACPP+RCPP+(PIUP-1.)*UCPP)
       DO 290 NS=1,MXNS
         TEM05=0.
         DO 270 IXXX2=1,MXI
           I=INO(IXXX2)
           TEM05=TEM05+FLOAT(DATAB(I))
  270    CONTINUE
         TEM06=0.
         DO 280 IXXX2=1,MXL
           L=SEINO(IXXX2)
           TEM06=TEM06+U(NSEB(L,NS))*FLOAT(DATAS(L))
  280    CONTINUE
         BTDC(NS)=TNB(NS)*(FLOAT(BDATA)+TEM05+TEM06)*RCPP
         TERM2=TERM2+BTDC(NS)
  290  CONTINUE
       STDC=TERM1+TERM2
       STDCI=STDC-(FLOAT(DDATA+BDATA)+SUM2+SUM3)*(PIUP-1.)*UCPP
       STDCR=STDC-STDCI
C
C.....CALCULATE TDC(I)
       DO 460 IXXX1=1,MXI
         I=INO(IXXX1)
         PPTM=(ONMCA(I)+OFMCA(I))/(ONMC+OFMC)
         DO 310 IXXX2=1,MXL
           L=SEINO(IXXX2)
           TEM07=0.
           DO 300 NS=1,MXNS
             TEM07=TEM07+TNB(NS)*ERHAB(L,NS)
  300      CONTINUE
           TERHAB(L)=TEM07
           SECODE(L)=0.
           SUM(L)=0.
           TQSA(L)=0.
```

```
        PPSE(I,L)=0.
310   CONTINUE
      NXXX1=NRM(I)
      IF(.NOT.(NXXX1.GT.0)) GO TO 400
        DO 380 IRMT=1,MXIRMT
          IF(.NOT.(IRMT.LE.NXXX1)) GO TO 390
          NXXX2=NJA(I,IRMT)
          IF(.NOT.(NXXX2.GT.0)) GO TO 370
            DO 350 LT=1,MXLT
              IF(.NOT.(LT.LE.NXXX2)) GO TO 360
              L=A(I,IRMT,LT)
              IF(.NOT.(IRMIN(I,IRMT).EQ.1)) GO TO 320
                SECD1=3-INT(QSA(I,IRMT,LT)/100.)
                SECODE(L)=FLOAT(SECD1)
                TQSA(L)=QSA(I,IRMT,LT)-AINT(QSA(I,IRMT,LT)/100.)*100.
320           CONTINUE
              DO 340 NS=1,MXNS
                IF(.NOT.(IRMIN(I,IRMT).EQ.RMI(I,NS))) GO TO 330
                  TQSA1=QSA(I,IRMT,LT)-AINT(QSA(I,IRMT,LT)/100.)*100.
                  SECD1=(INT(QSA(I,IRMT,LT)/100.)-1)
                  ST1=U(FLOAT(SECD1))*TNB(NS)*EBCBI(I,NS)
                  SECD1=(5-INT(QSA(I,IRMT,LT)/100.))*INT(QSA(I,IRMT,
     +                LT)/100.)
                  ST2=U(FLOAT(SECD1))*TNB(NS)*ERTBI(I,NS)
                  SUM(L)=SUM(L)+U(TQSA1)*(ST1+ST2)
330             CONTINUE
340           CONTINUE
350         CONTINUE
360         CONTINUE
370       CONTINUE
380     CONTINUE
390     CONTINUE
400   CONTINUE
      DO 420 IXXX2=1,MXL
        L=SEINO(IXXX2)
        T8=ERHAD(L)+TERHAB(L)
        IF(.NOT.(T8.GE.0.000001)) GO TO 410
          PPSE(I,L)=(U(TQSA(L))*U(SECODE(L))*ERHD(I)+SUM(L))/T8
410     CONTINUE
420   CONTINUE
      TEM08=0.
      DO 430 IXXX2=1,MXL
        L=SEINO(IXXX2)
        TEM08=TEM08+PPSE(I,L)*FLOAT(DATAS(L))
430   CONTINUE
      TEM10=0.
      DO 450 NS=1,MXNS
```

```
            TEM09=0.
            DO 440 IXXX3=1,MXL
              L=SEINO(IXXX3)
              TEM09=TEM09+PPSE(I,L)*U(NSEB(L,NS))*FLOAT(DATAS(L))
  440       CONTINUE
            TEM10=TEM10+TNB(NS)*(PPTM*FLOAT(BDATA)+FLOAT(DATAB(I))+TEM09)
  450     CONTINUE
          TDC(I)=(PPTM*FLOAT(DDATA+BDATA)+FLOAT(DATAD(I))+FLOAT(DATAB(I))+
     +      TEM08)*(ACPP+RCPP+(PIUP-1.)*UCPP)+RCPP*TEM10
  460   CONTINUE
C
        RETURN
        END
```

```
      SUBROUTINE COST11
C                                                                  810625 085349160
C*********************************************************************************
C*  CALCULATES MAINTENANCE TRAINING COST - MTRC                                  *
C*********************************************************************************
C
      COMMON /BMTRC/ BMTRC
      COMMON /COND/ COND(150)
      COMMON /CPD1/ CPD1
      COMMON /CPD2/ CPD2
      COMMON /DMTRC/ DMTRC
      COMMON /ERTBI/ ERTBI(150,10)
      COMMON /HPD1/ HPD1
      INTEGER HPD1
      COMMON /HPD2/ HPD2
      INTEGER HPD2
      COMMON /I/ I
      COMMON /IMTRC/ IMTRC
      REAL IMTRC
      COMMON /INO/ INO(150)
      COMMON /MTRC/ MTRC
      REAL MTRC
      COMMON /MTRCI/ MTRCI(150)
      REAL MTRCI
      COMMON /MXI/ MXI
      COMMON /MXNP/ MXNP
      COMMON /MXNS/ MXNS
      COMMON /NITEM/ NITEM(150,5)
      REAL NITEM
      COMMON /NP/ NP
      COMMON /NS/ NS
      COMMON /PAL1/ PAL1
      COMMON /PAL2B/ PAL2B
      COMMON /PAL2D/ PAL2D
      COMMON /PIUP/ PIUP
      COMMON /QTYP1/ QTYP1
      INTEGER QTYP1
      COMMON /QTYP2B/ QTYP2B
      INTEGER QTYP2B
      COMMON /QTYP2D/ QTYP2D
      INTEGER QTYP2D
      COMMON /RMTRC/ RMTRC
      COMMON /SPC1/ SPC1
      INTEGER SPC1
      COMMON /SPC2/ SPC2
      INTEGER SPC2
      COMMON /TEFM/ TEFM
```

```
      COMMON /TIME1/ TIME1(150)
      INTEGER TIME1
      COMMON /TORB/ TORB
      COMMON /TORD/ TORD
      COMMON /TRAVB/ TRAVB
      COMMON /TRAV1D/ TRAV1D
      COMMON /TYP2TF/ TYP2TF
      COMMON /T2BA/ T2BA
      COMMON /T2DA/ T2DA
      REAL ITPF1
      REAL ITPF2
      REAL ITPF3
      REAL ITPF4
      REAL ITPF5
      REAL NIUSED
C
C
      NIUSED=0
      TEMP1=0
      T1=0.
      T2DA=0.
      T2BA=0.
      DO 220 IXXX1=1,MXI
        I=INO(IXXX1)
        T1=T1+TIME1(I)
        T2DA=TIME1(I)*U(1-COND(I))+T2DA
        TEM01=0.
        DO 210 NS=1,MXNS
          TEM01=TEM01+ERTBI(I,NS)
  210   CONTINUE
        TEMP=TEM01
        T2BA=T2BA+TIME1(I)*U(TEMP)
  220 CONTINUE
      T2DA=T2DA*TYP2TF
      T2BA=T2BA*TYP2TF
      TEMP=(T2DA*QTYP2D*(1.+(PIUP-1.)*TORD)+T2BA*QTYP2B*(1.+(PIUP-1.)*
     +   TORB))/(HPD2*SPC2)
      IMTRC=AINT((T2DA*QTYP2D+T2BA*QTYP2B)/(HPD2*SPC2)+.9)*CPD2+QTYP2D*
     +   (AINT(T2DA/HPD2+.9)*PAL2D+TRAV1D*U(T2DA))+QTYP2B*(AINT(T2BA/
     +   HPD2+.9)*PAL2B+TRAVB*U(T2BA))+TEFM
      MTRC=AINT(TEMP+.9)*CPD2+(1.+(PIUP-1.)*TORD)*QTYP2D*(AINT(T2DA/
     +   HPD2+.9)*PAL2D+TRAV1D*U(T2DA))+(1.+(PIUP-1.)*TORB)*QTYP2B*
     +   (AINT(T2BA/HPD2+.9)*PAL2B+TRAVB*U(T2BA))+TEFM
      IF(.NOT.((HPD1.GT.0.00001).AND.(SPC1.GT.0.00001))) GO TO 230
        MTRC=MTRC+AINT(T1/HPD1+.9)*AINT(QTYP1/SPC1+.9)*CPD1+QTYP1*
     +     (AINT(T1/HPD1+.9)*PAL1+TRAV1D*U(T1))
        IMTRC=IMTRC+AINT(T1/HPD1+.9)*AINT(QTYP1/SPC1+.9)*CPD1+QTYP1*
```

```
     +     (AINT(T1/HPD1+.9)*PAL1+TRAV1D*U(T1))
  230 CONTINUE
      RMTRC=MTRC-1MTRC
      BMTRC=0.
      T2=QTYP2D*T2DA+QTYP2B*T2BA
      IF(.NOT.(T2.GE.0.000001)) GO TO 240
        BMTRC=(QTYP2B*T2BA)/T2*AINT(TEMP+.9)*CPD2+(1.+(PIUP-1.)*TORB)*
     +     QTYP2B*(AINT(T2BA/HPD2+.9)*PAL2B+TRAVB*U(T2BA))
  240 CONTINUE
      DMTRC=MTRC-BMTRC
      DO 270 IXXX1=1,MXI
        I=INO(IXXX1)
        TEM02=0.
        DO 250 NP=1,MXNP
          TEM02=TEM02+NITEM(I,NP)
  250   CONTINUE
        TEMP1=TEM02
        IF(.NOT.(TEMP1.GT.0)) GO TO 260
          NIUSED=NIUSED+1.
  260   CONTINUE
  270 CONTINUE
      DO 380 IXXX1=1,MXI
        I=INO(IXXX1)
        ITPF1=0.
        ITPF2=0.
        ITPF3=0.
        ITPF4=0.
        ITPF5=0.
        TEM03=0.
        DO 280 NP=1,MXNP
          TEM03=TEM03+NITEM(I,NP)
  280   CONTINUE
        TEMP1=TEM03
        IF(.NOT.(T1.GT.0.000001)) GO TO 290
          ITPF1=TIME1(I)/T1
  290   CONTINUE
        TEM04=0.
        DO 300 NS=1,MXNS
          TEM04=TEM04+ERTBI(I,NS)
  300   CONTINUE
        TEMP=TEM04
        T2=QTYP2D*T2DA+QTYP2B*T2BA
        IF(.NOT.(T2.GE.0.000001)) GO TO 310
          ITPF2=TYP2TP*TIME1(I)*(QTYP2D*U(1.-COND(I))+QTYP2B*U(TEMP))*
     +       1./T2
  310   CONTINUE
        IF(.NOT.(T2DA.GE.0.000001)) GO TO 320
```

```
          ITPF3=TYP2TF*TIME1(I)*U(1.-COND(I))/T2DA
  320   CONTINUE
        IF(.NOT.(T2BA.GE.0.000001)) GO TO 330
          ITPF4=TYP2TF*TIME1(I)*U(TEMP)/T2BA
  330   CONTINUE
        T3=QTYP1*T1+QTYP2D*T2DA+QTYP2B*T2BA
        ITPF5=1/NIUSED
        IF(.NOT.((T3.LE.0.000001).OR.(T1.LE.0.000001))) GO TO 350
          IF(.NOT.(TEMP1.LT.0.000001)) GO TO 340
            ITPF5=0.
  340     CONTINUE
  350   CONTINUE
        IF(.NOT.((T3.GT.0.000001).AND.(T1.GT.0.000001))) GO TO 360
          ITPF5=TIME1(I)*(QTYP1+TYP2TF*(QTYP2D*U(1.-COND(I))+QTYP2B*
     +      U(TEMP)))*1./T3
  360   CONTINUE
        TEMP=(T2DA*QTYP2D*(1.+(PIUP-1.)*TORD)+T2BA*QTYP2B*(1.+(PIUP-1.)*
     +    TORB))*1./(HPD2*SPC2)
        TERM1=0.
        IF(.NOT.((HPD1.GT.0.00001).AND.(SPC1.GT.0.00001))) GO TO 370
          TERM1=ITPF1*(AINT(T1/HPD1+.9)*AINT(QTYP1/SPC1+.9)*CPD1+QTYP1*
     +      (AINT(T1/HPD1+.9)*PAL1+TRAV1D*U(T1)))
  370   CONTINUE
        TERM2=ITPF2*AINT(TEMP+.9)*CPD2
        TERM3=ITPF3*(1.+(PIUP-1.)*TORD)*QTYP2D*(AINT(T2DA/HPD2+.9)*
     +    PAL2D+TRAV1D*U(T2DA))
        TERM4=ITPF4*(1.+(PIUP-1.)*TORB)*QTYP2B*(AINT(T2BA/HPD2+.9)*
     +    PAL2B+TRAVB*U(T2BA))
        TERM5=ITPF5*TEFM
        MTRC(I)=TERM1+TERM2+TERM3+TERM4+TERM5
  380 CONTINUE
C
      RETURN
      END
```

```
      FUNCTION CHLCC(CC,CR,CN,I)
C                                                          810625 085415469
C*****************************************************************************
C*  ATC MOD SLR - 20 MAY 80                                                  *
C*  COMPUTES CHANGE IN LCC FOR REPAIR LEVEL SENSITIVITY                      *
C*****************************************************************************
C
      COMMON /A/ A(150,4,3)
      INTEGER A
      COMMON /B/ B
      INTEGER B
      COMMON /BAA/ BAA
      COMMON /BCMH/ BCMH(150)
      COMMON /BLR/ BLR
      COMMON /BMF/ BMF
      COMMON /BMH/ BMH(150)
      COMMON /BRCT/ BRCT
      COMMON /BTYPE/ BTYPE(10)
      INTEGER BTYPE
      COMMON /CIMF/ CIMF(10)
      COMMON /COND/ COND(150)
      COMMON /CPPD/ CPPD(3)
      COMMON /CRCT/ CRCT
      COMMON /CSE/ CSE(120)
      COMMON /DAA/ DAA
      COMMON /DAD/ DAD
      COMMON /DLR/ DLR
      COMMON /DMF/ DMF
      COMMON /DMH/ DMH(150)
      COMMON /DRCT/ DRCT(3)
      COMMON /ERHAB/ ERHAB(120,10)
      COMMON /ERHAD/ ERHAD(120)
      COMMON /FAIL/ FAIL(150,10)
      COMMON /FPR/ FPR(150)
      COMMON /HDWRIT/ HDWRIT(150,5)
      COMMON /IRMIN/ IRMIN(150,4)
      COMMON /IRMT/ IRMT
      COMMON /ISCA/ ISCA(150)
      REAL ISCA
      COMMON /ISET/ ISET(120,10)
      REAL ISET
      COMMON /ISETD/ ISETD(120)
      REAL ISETD
      COMMON /L/ L
      COMMON /LO/ LO(10)
      COMMON /LRU/ LRU(150)
      COMMON /LT/ LT
```

```
COMMON /MSE/ MSE(120)
REAL MSE
COMMON /MXIRMT/ MXIRMT
COMMON /MXL/ MXL
COMMON /MXLT/ MXLT
COMMON /MXNP/ MXNP
COMMON /MXNS/ MXNS
COMMON /NBC/ NBC(10)
REAL NBC
COMMON /NFB/ NFB(150,10)
REAL NFB
COMMON /NFD/ NFD(150)
REAL NFD
COMMON /NHB/ NHB(10)
COMMON /NHI/ NHI(150)
COMMON /NITEM/ NITEM(150,5)
REAL NITEM
COMMON /NJA/ NJA(150,4)
COMMON /NP/ NP
COMMON /NRM/ NRM(150)
COMMON /NRTS/ NRTS(150)
REAL NRTS
COMMON /NRUC/ NRUC
REAL NRUC
COMMON /NS/ NS
COMMON /NSEB/ NSEB(120,10)
REAL NSEB
COMMON /NSED/ NSED(120)
REAL NSED
COMMON /OST/ OST(3)
COMMON /PA/ PA(150)
COMMON /PIUP/ PIUP
COMMON /QSA/ QSA(150,4,3)
COMMON /RM/ RM(150)
COMMON /RMI/ RMI(150,10)
INTEGER RMI
COMMON /RSCA/ RSCA(150)
COMMON /RTS/ RTS(150)
COMMON /SA/ SA
COMMON /SAT/ SAT(10)
COMMON /SEINO/ SEINO(120)
INTEGER SEINO
COMMON /TNB/ TNB(10)
COMMON /TOTT/ TOTT(5)
COMMON /UP/ UP(150)
COMMON /USE/ USE(120,10)
COMMON /USED/ USED(120)
```

```
      COMMON /WT/ WT(150)
      COMMON /XFPR/ XFPR
      COMMON /XITEMQ/ XITEMQ(150)
      COMMON /XUC/ XUC
      DIMENSION CHSE(120,10)
      DIMENSION CHSED(120)
      DIMENSION CNF6(10)
      DIMENSION CPP(10)
      DIMENSION CRH(10)
      REAL NHNRT
      REAL NHRT
C
C
C
C.....  CALCULATES CRH(NS),CRHD
      NHRT=0.
      NHNRT=0.
      IF(.NOT.(NHI(I).NE.0)) GO TO 210
        NHRT=KTS(NHI(I))
        NHNRT=NRTS(NHI(I))
  210 CONTINUE
      DO 240 NS=1,MXNS
        CRH(NS)=0.
        IF(.NOT.(BTYPE(NS).NE.3)) GO TO 230
          TEM01=0.
          DO 220 B=1,MXNS
            IF(.NOT.(NBE(B).EQ.NS)) GO TO 220
            TEM01=TEM01+FAIL(I,B)*NBC(B)
  220     CONTINUE
          CRH(NS)=FAIL(I,NS)*(FLOAT(LRU(I))+NHRT)*CR*BMH(I)*BMF+CIME(NS)
     +      *TEM01*(FLOAT(LRU(I))+NHRT)*((CR+CN+UC(XFPR*FPR(I))*CC)*
     +      BCMH(I)+CK*BMH(I))*BMF
  230   CONTINUE
  240 CONTINUE
      TEM02=0.
      DO 250 NS=1,MXNS
        TEM02=TEM02+FAIL(I,NS)*TNB(NS)
  250 CONTINUE
      CRHD=TEM02*((FLOAT(LRU(I))+NHRT)*CN-NHNRT*CC)*DMH(I)*DMF
C
C.....  CALCULATES CHSE(L,NS) AND CHSED(L)
      DO 270 IXXX1=1,MXL
        L=SEINO(IXXX1)
        CHSED(L)=0.
        DO 260 NS=1,MXNS
          CHSE(L,NS)=0.
  260   CONTINUE
```

```
270 CONTINUE
    DO 420 NS=1,MXNS
      NXXX1=NRM(I)
      IF(.NOT.(NXXX1.GT.0)) GO TO 410
        DO 390 IRMT=1,MXIRMT
          IF(.NOT.(IRMT.LE.NXXX1)) GO TO 400
          NXXX2=NVA(I,IRMT)
          IF(.NOT.(NXXX2.GT.0)) GO TO 380
            DO 360 LT=1,MXLT
              IF(.NOT.(LT.LE.NXXX2)) GO TO 370
                QSA(I,IRMT,LT)
                QSA
              IF(.NOT.(IRMIN(I,IRMT).EQ.RMI(I,NS))) GO TO 280
                QSA(I,IRMT,LT)-AINT(QSA(I,IRMT,LT)/100.)*100.
280           CONTINUE
              IF(.NOT.(CRH(NS).GT..000001)) GO TO 290
                CHSE(L,NS)=USE(L,NS)*(CRH(NS)/BAA)*AMAX1(ISET(L,NS),
     +          TQSA
290           CONTINUE
              IF(.NOT.(CRH(NS).LT.-.000001)) GO TO 310
                IF(.NOT.(ERHAB(L,NS).GT..000001.OR.ERHAB(L,NS).LT.
     +            -.000001)) GO TO 300
                CHSE(L,NS)=CRH(NS)/ERHAB(L,NS)*NSEB(L,NS)
300           CONTINUE
310         CONTINUE
            TQSA=0.
            IF(.NOT.(IRMIN(I,IRMT).EQ.1)) GO TO 320
              TQSA=QSA(I,IRMT,LT)-AINT(QSA(I,IRMT,LT)/100.)*100.
320         CONTINUE
            IF(.NOT.(CRHD.GT..000001)) GO TO 330
              CHSED(L)=USED(L)*CRHD/DAA*AMAX1(ISETD(L),TQSA)
330         CONTINUE
            IF(.NOT.(CRHD.LT.-.000001)) GO TO 350
              IF(.NOT.(ERHAD(L).GT..000001.OR.ERHAD(L).LT.
     +          -.000001)) GO TO 340
                CHSED(L)=CRHD/ERHAD(L)*NSED(L)
340           CONTINUE
350         CONTINUE
360       CONTINUE
370       CONTINUE
380     CONTINUE
390   CONTINUE
400   CONTINUE
410 CONTINUE
420 CONTINUE
C
C.....  CALCULATES CNFB(NS) AND CNFD
```

```
      DO 440 NS=1,MXNS
        TEM03=0.
        DO 430 B=1,MXNS
          IF(.NOT.(NHB(B).EQ.NS)) GO TO 430
          TEM03=TEM03+(FAIL(I,B)*NBC(B))
  430   CONTINUE
        CNFB(NS)=(1.-SAT(NS))*FAIL(I,NS)*(FLOAT(LRU(I))+NHRT)*(CR*BRCT+
     +    (CN+CC)*OST(LO(NS)))+CIMF(NS)*TEM03*(FLOAT(LRU(I))+NHRT)*(CR*
     +    CRCT+(CN+CC)*(OST(LO(NS))+U(XFPR*FPR(I))*CRCT))
  440 CONTINUE
      TEM04=0.
      DO 450 NS=1,MXNS
        TEM04=TEM04+FAIL(I,NS)*TNB(NS)*((FLOAT(LRU(I))+NHRT)*CN*
     +    DRCT(LO(NS))-NHNRT*CC*DAD)
  450 CONTINUE
      CNFD=TEM04
C
C.....  CALCULATES CPP(NS)
      DO 490 NS=1,MXNS
        RTSNFB=RTS(I)*NFB(I,NS)
        IF(.NOT.(RTSNFB.LT..000001)) GO TO 460
          CPP(NS)=U(CR*(CNFB(NS)+NFB(I,NS)))
  460   CONTINUE
        IF(.NOT.(RTSNFB.GT..000001)) GO TO 480
          CPP(NS)=0.
          IF(.NOT.(CR.LT..000001)) GO TO 470
            CPP(NS)=CR/RTS(I)
  470     CONTINUE
  480   CONTINUE
  490 CONTINUE
      TEM05=0.
      DO 500 NS=1,MXNS
        TEM05=TEM05+TNB(NS)*(F(CNFB(NS)+NFB(I,NS))-F(NFB(I,NS)))
  500 CONTINUE
      XITEMQ(I)=TEM05+(F(CNFD+NFD(I))-F(NFD(I)))
C
C.....  CALCULATES CHLCC
      CD=0.
      IF(.NOT.(LRU(I).EQ.0)) GO TO 510
        CD=COND(NHI(I))
  510 CONTINUE
      TEM06=0.
      DO 520 NS=1,MXNS
        TEM06=TEM06+FAIL(I,NS)*TNB(NS)
  520 CONTINUE
      TEMP=12.*TEM06*(1.-COND(NHI(I)))
      TEM07=0.
```

```
      DO 530 NS=1,MXNS
        TEM07=TEM07+TNB(NS)*(F(CNFB(NS)+NFB(I,NS)))
  530 CONTINUE
      CHLCCA=(TEM07+(F(CNFD+NFD(I))))*UP(I)*XLEARN(I)*XUC-ISCA(I)+TEMP*
     +  UP(I)*XUC*((NRUC*XLEARN(I)+(PIUP-NRUC))*(COND(I)+CC)+PIUP*(1.-
     +  (COND(I)+CC))*RM(I))-RSCA(I)
      TEM08=0.
      DO 540 NS=1,MXNS
        TEM08=TEM08+FAIL(I,NS)*TNB(NS)*((FLOAT(LRU(I))+NHRT)*(CR*BMH(I)*
     +    BMF*BLR+CN*(DMH(I)*DMF*DLR+2.*CPPD(LO(NS))*WT(I))+CC*
     +    CPPD(LO(NS))*WT(I))-NHNRT*CC*DMH(I)*DMF*DLR)
  540 CONTINUE
      CHLCCB=12.*PIUP*TEM08
      CHLCCD=0.
      NXXX1=NRM(I)
      IF(.NOT.(NXXX1.GT.0)) GO TO 620
        DO 610 IRMT=1,MXIRMT
          NXXX2=NJA(I,IRMT)
          IF(.NOT.(NXXX2.GT.0)) GO TO 600
            DO 580 LT=1,MXLT
              IF(.NOT.(LT.LE.NXXX2)) GO TO 590
              L=A(I,IRMT,LT)
              CHLCCC=0.
              DO 560 NS=1,MXNS
                IF(.NOT.(IRMT.EQ.RMI(I,NS))) GO TO 550
                  CHLCCC=CHLCCC+U(QSA(I,IRMT,LT)-AINT(QSA(I,IRMT,LT)/
     +              100.)*100.)*TNB(NS)*CHSE(L,NS)
  550           CONTINUE
  560         CONTINUE
              CHLCCF=0.
              IF(.NOT.(IRMT.EQ.1)) GO TO 570
                CHLCCF=CHLCCF+CHSED(L)*U(QSA(I,IRMT,LT)-AINT(QSA(I,IRMT,
     +            LT)/100.)*100.)
  570         CONTINUE
              CHLCCD=CHLCCD+((CHLCCC+CHLCCF)*CSE(L)*(1.+PIUP*MSE(L)))
  580       CONTINUE
  590       CONTINUE
  600     CONTINUE
  610   CONTINUE
  620 CONTINUE
      TEM09=0.
      DO 630 NS=1,MXNS
        TEM09=TEM09+(1.-SAT(NS))*TNB(NS)*PIUP*SA*(AMIN1(F(CNFB(NS)+
     +    NFB(I,NS)),1.)-AMIN1(F(NFB(I,NS)),1.)+CPP(NS)*PA(I))
  630 CONTINUE
      TEM10=0.
      DO 640 NP=1,MXNP
```

```
        TEM10=TEM10+TOTT(NP)*(NITEM(I,NP)*UP(I)*XLEARN(I)*XUC-HDWRIT(I,
     +     NP))
  640 CONTINUE
      CHLCCE=TEM09+TEM10
      CHLCC=CHLCCA+CHLCCB+CHLCCD+CHLCCE
C
      RETURN
      END
```

```
      SUBROUTINE DPIUP
C                                                          810625 085444021
C*****************************************************************************
C*  COMPUTES PROGRAM OPERATIONAL                                             *
C*  ATU MOD SLR-4 JUNE 1980                                                  *
C*  LIFETIME - PIUP FACTOR                                                   *
C*****************************************************************************
C
      COMMON /COND/ COND(150)
      COMMON /CPIUP/ CPIUP
      COMMON /FAIL/ FAIL(150,10)
      COMMON /FINC/ FINC
      COMMON /I/ I
      COMMON /IIMCR/ IIMCR
      REAL IIMCR
      COMMON /INO/ INO(150)
      COMMON /LDERV/ LDERV
      COMMON /MXI/ MXI
      COMMON /MXNS/ MXNS
      COMMON /NHI/ NHI(150)
      COMMON /NS/ NS
      COMMON /OC/ OC
      COMMON /OFMC/ OFMC
      COMMON /ONMC/ ONMC
      COMMON /PIUP/ PIUP
      COMMON /RM/ RM(150)
      COMMON /RMTRC/ RMTRC
      COMMON /SECR/ SECR
      COMMON /STDCR/ STDCR
      COMMON /TDPIUP/ TDPIUP
      COMMON /TNB/ TNB(10)
      COMMON /UP/ UP(150)
      COMMON /XUC/ XUC
C
C
      CPIUP=AINT(FINC*PIUP+.5)
      TEM02=0.
      DO 220 IXXX1=1,MXI
        I=INO(IXXX1)
        TEM01=0.
        DO 210 NS=1,MXNS
          TEM01=TEM01+FAIL(I,NS)*TNB(NS)
  210   CONTINUE
        TEM02=TEM02+TEM01*(1.-COND(NHI(I)))*UP(I)*XUC*(COND(I)+(1.-
     +    COND(I))*RM(I))
  220 CONTINUE
      T1=PIUP*12.*TEM02
```

```
      TDPIUP=CPIUP/PIUP*(OC+ONMC+OFMC+SECR+IIMCR+T1+PIUP/(PIUP-1.)*
     +   (STDCR+RMTRC))/1000000.
C
      RETURN
      END
```

```
      SUBROUTINE DDMF
C                                                          810625 085446134
C*****************************************************************************
C*  BASELINE CHANGE                                                          *
C*  COMPUTES MAINTENANCE REPAIR TIME                                         *
C*  FACTORS - BMF AND DMF                                                    *
C*****************************************************************************
C
      COMMON /BAA/ BAA
      COMMON /BLR/ BLR
      COMMON /CSE/ CSE(120)
      COMMON /DAA/ DAA
      COMMON /DLR/ DLR
      COMMON /ERHAB/ ERHAB(120,10)
      COMMON /ERHAD/ ERHAD(120)
      COMMON /ERHBI/ ERHBI(150,10)
      COMMON /ERHD/ ERHD(150)
      COMMON /FINC/ FINC
      COMMON /I/ I
      COMMON /INO/ INO(150)
      COMMON /ISET/ ISET(120,10)
      REAL ISET
      COMMON /ISETD/ ISETD(120)
      REAL ISETD
      COMMON /L/ L
      COMMON /LDERV/ LDERV
      COMMON /MSE/ MSE(120)
      REAL MSE
      COMMON /MXI/ MXI
      COMMON /MXL/ MXL
      COMMON /MXNS/ MXNS
      COMMON /NS/ NS
      COMMON /ONMC/ ONMC
      COMMON /PIUP/ PIUP
      COMMON /SEINO/ SEINO(120)
      INTEGER SEINO
      COMMON /TDMF/ TDMF
      COMMON /TNB/ TNB(10)
      COMMON /USE/ USE(120,10)
      COMMON /USED/ USED(120)
C
C
      TDMFA=FINC*ONMC
      DO 220 IXXX1=1,MXI
        I=INO(IXXX1)
        TEM01=0.
        DO 210 NS=1,MXNS
```

```
          TEM01=TEM01+ERHBI(I,NS)*TNB(NS)
  210     CONTINUE
          TDMFA=TDMFA+12.*PIUP*FINC*(TEM01*BLR+ERHD(I)*DLR)
  220   CONTINUE
        TEM03=0.
        DO 240 IXXX1=1,MXL
          L=SEINO(IXXX1)
          TEM02=0.
          DO 230 NS=1,MXNS
            TEM02=TEM02+(USE(L,NS)*ERHAB(L,NS)*ISET(L,NS)*TNB(NS)/BAA)
  230     CONTINUE
          TEM03=TEM03+(TEM02+USED(L)*ERHAD(L)*ISETD(L)/DAA)*CSE(L)*(1.+
     +      PIUP*MSE(L))
  240   CONTINUE
        TDMF=TDMFA+FINC*TEM03
        TDMF=TDMF/1000000.
C
        RETURN
        END
```

```
      SUBROUTINE DRM
C                                                                810625 085449906
C*****************************************************************************
C*  ATU MOD SLR - 5 JUN 80                                                   *
C*  COMPUTES ITEM SPECIFIC REPAIR MATERIALS COST                             *
C*  FACTOR - RM(I)                                                           *
C*****************************************************************************
C
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      COMMON /COND/ COND(150)
      COMMON /FAIL/ FAIL(150,10)
      COMMON /FINC/ FINC
      COMMON /I/ I
      COMMON /IDRM/ IDRM(150)
      COMMON /INO/ INO(150)
      COMMON /LDERV/ LDERV
      COMMON /LDRM/ LDRM
      COMMON /MXI/ MXI
      COMMON /MXNS/ MXNS
      COMMON /NHI/ NHI(150)
      COMMON /NS/ NS
      COMMON /PIUP/ PIUP
      COMMON /RM/ RM(150)
      COMMON /TDRM/ TDRM(150)
      COMMON /TNB/ TNB(10)
      COMMON /UP/ UP(150)
      COMMON /XUC/ XUC
C
C
      DO 220 IXXX1=1,MXI
        I=INO(IXXX1)
        TEM01=0.
        DO 210 NS=1,MXNS
          TEM01=TEM01+FAIL(I,NS)*TNB(NS)
  210   CONTINUE
        TDRM(I)=12.*TEM01*(1.-COND(NHI(I)))*PIUP*(1.-COND(I))*FINC*RM(I)
     +    *UP(I)*XUC/1000000.
  220 CONTINUE
C
      DO 999 IXXX=1,MXI
        IDRM  (IXXX)=INO   (IXXX)
  999 CONTINUE
      LD=LDRM
      IF (PRNTXX.NE.0) LD=MAX0(LD,LDERV )
      CALL TDSORT(TDRM  ,IDRM  ,LD,MXI   )
C
```

```
      RETURN
      END
```

```
      SUBROUTINE DXRM
C                                                          810625 085452124
C*****************************************************************************
C*  COMPUTES GLOBAL REPAIR MATERIALS COST                                    *
C*  FACTOR - XRM                                                             *
C*****************************************************************************
C
      COMMON /I/ I
      COMMON /INO/ INO(150)
      COMMON /LDERV/ LDERV
      COMMON /MXI/ MXI
      COMMON /TDRM/ TDRM(150)
      COMMON /TDXRM/ TDXRM
C
C
      TEM01=0.
      DO 210 IXXX1=1,MXI
        I=INO(IXXX1)
        TEM01=TEM01+TDRM(I)
  210 CONTINUE
      TDXRM=TEM01
C
      RETURN
      END
```

```
      SUBROUTINE DXUC
C                                                          810625 085453725
C*****************************************************************************
C*  COMPUTES GLOBAL UNIT COST FACTOR - XUC                                   *
C*  ATU MOD SLR - 23 JUNE 80                                                 *
C*****************************************************************************
C
      COMMON /FINC/ FINC
      COMMON /ISC/ ISC
      REAL ISC
      COMMON /LDERV/ LDERV
      COMMON /RSC/ RSC
      COMMON /TDXUC/ TDXUC
      COMMON /TERMH/ TERMH
C
C
      TDXUC=(FINC*(TERMH+ISC+RSC))/1000000.
C
      RETURN
      END
```

```
      SUBROUTINE DUP
C                                                                  810625 085454760
C*****************************************************************************
C*  ATC MOD SLR - 5 JUN 80                                                   *
C*  COMPUTES ITEM SPECIFIC UNIT COST                                         *
C*  FACTOR - UP(I)                                                           *
C*****************************************************************************
C
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      COMMON /FINC/ FINC
      COMMON /I/ I
      COMMON /IDUP/ IDUP(150)
      COMMON /INO/ INO(150)
      COMMON /ISCA/ ISCA(150)
      REAL ISCA
      COMMON /LC/ LC(150)
      REAL LC
      COMMON /LDERV/ LDERV
      COMMON /LDUP/ LDUP
      COMMON /MXI/ MXI
      COMMON /MXNP/ MXNP
      COMMON /NITEM/ NITEM(150,5)
      REAL NITEM
      COMMON /NP/ NP
      COMMON /RSCA/ RSCA(150)
      COMMON /TDUP/ TDUP(150)
      COMMON /TOTT/ TOTT(5)
      COMMON /UP/ UP(150)
      COMMON /XUC/ XUC
C
C
      DO 220 IXXX1=1,MXI
        I=INO(IXXX1)
        TEM01=0.
        DO 210 NP=1,MXNP
          TEM01=TEM01+TOTT(NP)*NITEM(I,NP)
  210   CONTINUE
        TDUP(I)=FINC*(TEM01*UP(I)*LC(I)*XUC+(ISCA(I)+RSCA(I))),1000000.
  220 CONTINUE
C
      DO 999 IXXX=1,MXI
        IDUP(IXXX)=INO(IXXX)
  999 CONTINUE
      LD=LDUP
      IF (PRNTXX.NE.0) LD=MAX0(LD,LDERV)
      CALL TDSORT(TDUP,IDUP,LD,MXI)
```

```
C
      RETURN
      END
```

```
      SUBROUTINE DFR
C                                                                  810625 085456462
C*****************************************************************************
C*  ATU MOD SLR - 5 JUN 80                                                   *
C*  COMPUTES ITEM SPECIFIC FAILURE RATE                                      *
C*   - FR(I)                                                                 *
C*****************************************************************************
C
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      COMMON /A/ A(150,4,3)
      INTEGER A
      COMMON /BAA/ BAA
      COMMON /COND/ COND(150)
      COMMON /CSE/ CSE(120)
      COMMON /DAA/ DAA
      COMMON /ERHBI/ ERHBI(150,10)
      COMMON /ERHD/ ERHD(150)
      COMMON /FAIL/ FAIL(150,10)
      COMMON /FINC/ FINC
      COMMON /I/ I
      COMMON /IDFR/ IDFR(150)
      COMMON /INO/ INO(150)
      COMMON /IRMIN/ IRMIN(150,4)
      COMMON /IRMT/ IRMT
      COMMON /ISCA/ ISCA(150)
      REAL ISCA
      COMMON /ISET/ ISET(120,10)
      REAL ISET
      COMMON /ISETD/ ISETD(120)
      REAL ISETD
      COMMON /L/ L
      COMMON /LDERV/ LDERV
      COMMON /LDFR/ LDFR
      COMMON /LT/ LT
      COMMON /MSE/ MSE(120)
      REAL MSE
      COMMON /MXI/ MXI
      COMMON /MXIRMT/ MXIRMT
      COMMON /MXLT/ MXLT
      COMMON /MXNS/ MXNS
      COMMON /NFB/ NFB(150,10)
      REAL NFB
      COMMON /NFD/ NFD(150)
      REAL NFD
      COMMON /NHI/ NHI(150)
      COMMON /NJA/ NJA(150,4)
```

```
      COMMON /NRM/ NRM(150)
      COMMON /NRUC/ NRUC
      REAL NRUC
      COMMON /NS/ NS
      COMMON /OFMCA/ OFMCA(150)
      COMMON /ONMCA/ ONMCA(150)
      COMMON /PIUP/ PIUP
      COMMON /QSA/ QSA(150,4,3)
      COMMON /RM/ RM(150)
      COMMON /RMI/ RMI(150,10)
      INTEGER RMI
      COMMON /RSCA/ RSCA(150)
      COMMON /SA/ SA
      COMMON /TDFR/ TDFR(150)
      COMMON /TISQ/ TISQ(150)
      COMMON /TISQN/ TISQN(150)
      COMMON /TNB/ TNB(10)
      COMMON /TQSA/ TQSA
      COMMON /UP/ UP(150)
      COMMON /USE/ USE(120,10)
      COMMON /USED/ USED(120)
      COMMON /XITEMQ/ XITEMQ(150)
      COMMON /XUC/ XUC
      COMMON /YRSQ/ YRSQ(150)
C
C
      DO 350 IXXX1=1,MXI
        I=INO(IXXX1)
        TEM01=0.
        DO 210 NS=1,MXNS
          TEM01=TEM01+TNB(NS)*F((1.+FINC)*NFB(I,NS))
  210   CONTINUE
        TISQN(I)=TEM01+F((1.+FINC)*NFD(I))
        XITEMQ(I)=(TISQN(I)-TISQ(I))+FINC*NRUC*YRSQ(I)
        TEM02=0.
        DO 220 NS=1,MXNS
          TEM02=TEM02+FAIL(I,NS)*TNB(NS)
  220   CONTINUE
        TEMP=12.*TEM02*(1.-COND(NHI(I)))
        TDFRA=(1.+FINC)*TEMP*(NRUC*XLEARN(I)+(PIUP-NRUC))*COND(I)+PIUP*
     +    (1.-COND(I))*RM(I)*UP(I)*XUC-RSCA(I)+TISQN(I)*UP(I)*XLEARN(I)
     +    *XUC-TSCA(I)+FINC*(ONMCA(I)+OFMCA(I))
        TDFRB=0.
        NXXX1=NRM(I)
        IF(.NOT.(NXXX1.GT.0)) GO TO 310
          DO 290 IRMT=1,MXIRMT
            IF(.NOT.(IRMT.LE.NXXX1)) GO TO 300
```

```
            NXXX2=NJA(I,IRMT)
            IF(.NOT.(NXXX2.GT.0)) GO TO 280
              DO 260 LT=1,MXLT
                IF(.NOT.(LT.LE.NXXX2)) GO TO 270
                L=A(I,IRMT,LT)
                TDFRB1=0.
                DO 240 NS=1,MXNS
                  IF(.NOT.(IRMIN(I,IRMT).EQ.RMI(I,NS))) GO TO 230
                    TQSA=QSA(I,IRMT,LT)-AINT(QSA(I,IRMT,LT)/100.)*100.
                    TDFRB1=USE(L,NS)*ERHB1(I,NS)*U(TQSA)*ISET(L,NS)*
     +                TNB(NS)/BAA+TDFRB1
  230             CONTINUE
  240           CONTINUE
                TDFRB2=0.
                IF(.NOT.(IRMIN(I,IRMT).EQ.1)) GO TO 250
                  TQSA=QSA(I,IRMT,LT)-AINT(QSA(I,IRMT,LT)/100.)*100.
                  TDFRB2=USED(L)*ERHD(I)*U(TQSA)*ISETD(L)/DAA
  250           CONTINUE
                TDFRB=TDFRB+FINC*(TDFRB1+TDFRB2)*CSE(L)*(1.+PIUP*MSE(L))
  260         CONTINUE
  270         CONTINUE
  280       CONTINUE
  290     CONTINUE
  300     CONTINUE
  310   CONTINUE
        TEM03=0.
        DO 320 NS=1,MXNS
          TEM03=TEM03+(AMIN1(F((1.+FINC)*NFB(I,NS)),1.)-AMIN1(F(NFB(I,
     +      NS)),1.))*TNB(NS)
  320   CONTINUE
        TDFR(I)=(TDFRA+TDFRB+TEM03*PIUP*SA)/1000000.
  330 CONTINUE
C
      DO 999 IXXX=1,MXI
        IDFR  (IXXX)=INO   (IXXX)
  999 CONTINUE
      LD=LDFR
      IF (PRNTXX.NE.0) LD=MAX0(LD,LDERV )
      CALL TDSORT(TDFR  ,IDFR  ,LD,MXI   )
C
      RETURN
      END
```

```
      SUBROUTINE DXFR
C                                                                  810625 085504857
C*****************************************************************************
C*  COMPUTES GLOBAL FAILURE RATE FACTOR - XFR                                *
C*****************************************************************************
C
      COMMON /I/ I
      COMMON /INO/ INO(150)
      COMMON /LDERV/ LDERV
      COMMON /MXI/ MXI
      COMMON /TDFR/ TDFR(150)
      COMMON /TDXFR/ TDXFR
C
C
      TEM01=0.
      DO 210 IXXX1=1,MXI
        I=INO(IXXX1)
        TEM01=TEM01+TDFR(I)
  210 CONTINUE
      TDXFR=TEM01
C
      RETURN
      END
```

```
      SUBROUTINE DFPR
C                                                          810625 085507289
C*****************************************************************************
C*  COMPUTES ITEM FALSE PULL RATE - FPR(I)                                   *
C*****************************************************************************
C
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      COMMON /A/ A(150,4,3)
      INTEGER A
      COMMON /B/ B
      INTEGER B
      COMMON /BAA/ BAA
      COMMON /BCMH/ BCMH(150)
      COMMON /BLR/ BLR
      COMMON /BMF/ BMF
      COMMON /BRCT/ BRCT
      COMMON /BTYPE/ BTYPE(10)
      INTEGER BTYPE
      COMMON /CIMF/ CIMF(10)
      COMMON /COND/ COND(150)
      COMMON /CPPC/ CPPC
      COMMON /CRCT/ CRCT
      COMMON /CSE/ CSE(120)
      COMMON /FAIL/ FAIL(150,10)
      COMMON /FINC/ FINC
      COMMON /FPR/ FPR(150)
      COMMON /HDWRIT/ HDWRIT(150,5)
      COMMON /I/ I
      COMMON /IDFPR/ IDFPR(150)
      COMMON /INO/ INO(150)
      COMMON /IRMIN/ IRMIN(150,4)
      COMMON /IRMT/ IRMT
      COMMON /ISCA/ ISCA(150)
      REAL ISCA
      COMMON /ISET/ ISET(120,10)
      REAL ISET
      COMMON /L/ L
      COMMON /LDERV/ LDERV
      COMMON /LDFPR/ LDFPR
      COMMON /LRU/ LRU(150)
      COMMON /LT/ LT
      COMMON /MSE/ MSE(120)
      REAL MSE
      COMMON /MXI/ MXI
      COMMON /MXIRMT/ MXIRMT
      COMMON /MXLT/ MXLT
```

```
      COMMON /MXNP/ MXNP
      COMMON /MXNS/ MXNS
      COMMON /NBC/ NBC(10)
      REAL NBC
      COMMON /NFB/ NFB(150,10)
      REAL NFB
      COMMON /NHB/ NHB(10)
      COMMON /NHI/ NHI(150)
      COMMON /NITEM/ NITEM(150,5)
      REAL NITEM
      COMMON /NJA/ NJA(150,4)
      COMMON /NP/ NP
      COMMON /NRM/ NRM(150)
      COMMON /NRUC/ NRUC
      REAL NRUC
      COMMON /NS/ NS
      COMMON /OSTC/ OSTC
      COMMON /PIUP/ PIUP
      COMMON /QSA/ QSA(150,4,3)
      COMMON /RM/ RM(150)
      COMMON /RMH/ RMH(150)
      COMMON /RMI/ RMI(150,10)
      INTEGER RMI
      COMMON /RSCA/ RSCA(150)
      COMMON /SA/ SA
      COMMON /SAT/ SAT(10)
      COMMON /TDFPR/ TDFPR(150)
      COMMON /TISQ/ TISQ(150)
      COMMON /TNB/ TNB(10)
      COMMON /TOTT/ TOTT(5)
      COMMON /TQSA/ TQSA
      COMMON /UP/ UP(150)
      COMMON /USE/ USE(120,10)
      COMMON /WT/ WT(150)
      COMMON /XFPR/ XFPR
      COMMON /XITEMQ/ XITEMQ(150)
      COMMON /XUC/ XUC
      DIMENSION CHNFB(150,10)
C
C
      DO 270 NS=1,MXNS
        IF(.NOT.(BTYPE(NS).EQ.3)) GO TO 220
          DO 210 IXXX2=1,MXI
            I=INO(IXXX2)
            CHNFB(I,NS)=FAIL(I,NS)*FLOAT(LRU(I))*FINC*FPR(I)*XFPR*OSTC
  210     CONTINUE
  220   CONTINUE
```

```
      IF(.NOT.(BTYPE(NS).NE.3)) GO TO 260
        DO 250 IXXX2=1,MXI
          I=INO(IXXX2)
          CHNFB(I,NS)=FAIL(I,NS)*FLOAT(LRU(I))*FINC*FPR(I)*XFPR*BRCT
          IF(.NOT.(BTYPE(NS).EQ.2)) GO TO 240
            TEM01=0.
            DO 230 B=1,MXNS
              IF(.NOT.(NHB(B).EQ.NS)) GO TO 230
              TEM01=TEM01+FAIL(I,B)*NBC(B)
230         CONTINUE
            CHNFB(I,NS)=CHNFB(I,NS)+CIMF(NS)*TEM01*FLOAT(LRU(I))*FINC*
     +        FPR(I)*XFPR*CRCT
240       CONTINUE
250     CONTINUE
260   CONTINUE
270 CONTINUE
    DO 440 IXXX1=1,MXI
      I=INO(IXXX1)
      TDFPR(I)=0.
      IF(.NOT.(LRU(I).NE.0)) GO TO 430
        TEM02=0.
        DO 280 NS=1,MXNS
          TEM02=TEM02+TNB(NS)*(F(NFB(I,NS)+CHNFB(I,NS))-F(NFB(I,NS)))
280     CONTINUE
        XITEMQ(I)=TEM02
        TEM03=0.
        DO 290 NS=1,MXNS
          TEM03=TEM03+TNB(NS)*FAIL(I,NS)
290     CONTINUE
        TDFPRA=(TISQ(I)+XITEMQ(I))*UP(I)*XLEARN(I)*XUC-ISCA(I)+12.*
     +    PIUP*TEM03*FINC*FPR(I)*XFPR*RMH(I)*BMF*BLR
        TEM04=0.
        DO 300 NS=1,MXNS
          TEM04=TEM04+TNB(NS)*FAIL(I,NS)*(BCMH(I)*BMF*BLR+SAT(NS)*2.*
     +      CPPC*WT(I))
300     CONTINUE
        TDFPRB=12.*PIUP*TEM04*FINC*XFPR*FPR(I)
        TDFPRC=0.
        DO 390 NS=1,MXNS
          TEMP=0.
          NXXX1=NRM(I)
          IF(.NOT.(NXXX1.GT.0)) GO TO 370
            DO 350 IRMT=1,MXIRMT
              IF(.NOT.(IRMT.LE.NXXX1)) GO TO 360
              IF(.NOT.(IRMIN(I,IRMT).EQ.RMI(I,NS))) GO TO 340
                NXXX2=NJA(I,IRMT)
                IF(.NOT.(NXXX2.GT.0)) GO TO 330
```

```
                    DO 310 LT=1,MXLT
                      IF(.NOT.(LT.LE.NXXX2)) GO TO 320
                      TQSA=QSA(I,IRMT,LT)-AINT(QSA(I,IRMT,LT)/100.)*100.
                      L=A(I,IRMT,LT)
                      TEMP=TEMP+U(TQSA)*USE(L,NS)*ISET(L,NS)*CSE(L)*(1.+
     +                  PIUP*MSE(L))
  310                 CONTINUE
  320                 CONTINUE
                    CONTINUE
                  CONTINUE
                CONTINUE
                CONTINUE
  330           CONTINUE
  340           TEM05=0.
                DO 380 B=1,MXNS
                  IF(.NOT.(NHB(B).EQ.NS)) GO TO 380
                  TEM05=TEM05+FAIL(I,B)*NBC(B)
  380           CONTINUE
                TDFPRC=TDFPRC+(1.-SAT(NS))*(FAIL(I,NS)+CIMF(NS)*TEM05)*TEMP
  390         CONTINUE
              TDFPRC=TDFPRC*FINC*FPR(I)*XFPR*BCMH(I)*BMF/BAA
              TEM06=0.
              DO 400 NS=1,MXNS
                TEM06=TEM06+FAIL(I,NS)*TNB(NS)
  400         CONTINUE
              TEMP=12.*TEM06*(1.-COND(NHI(I)))
              TEM07=0.
              DO 410 NS=1,MXNS
                TEM07=TEM07+TNB(NS)*(AMIN1(F(CHNFB(I,NS)+NFB(I,NS)),1.)-
     +            AMIN1(F(NFB(I,NS)),1.))
  410         CONTINUE
              TEM08=0.
              DO 420 NP=1,MXNP
                TEM08=TEM08+TOTT(NP)*(NITEM(I,NP)*UP(I)*XLEARN(I)*XUC-
     +            HDWRIT(I,NP))
  420         CONTINUE
              TDFPRD=TEM07*PIUP*SA+TEM08+TEMP*((NRUC*XLEARN(I)+(PIUP-NRUC)
     +          )*COND(I)+PIUP*(1.-COND(I))*RM(I))*UP(I)*XUC-RSCA(I)
              TDFPR(I)=(TDFPRA+TDFPRB+TDFPRC+TDFPRD)/1000000.
  430       CONTINUE
  440     CONTINUE
C
          DO 999 IXXX=1,MXI
            IDFPR(IXXX)=INO(IXXX)
  999     CONTINUE
          LD=LDFPR
          IF (PRNTXX.NE.0) LD=MAX0(LD,LDERV)
```

```
      CALL TDSORT(TDFPR ,IDFPR ,LD,MXI    )
C
      RETURN
      END
```

```
      SUBROUTINE DXFPR
C                                                          810625 085523469
C*****************************************************************************
C*  COMPUTES GLOBAL FALSE PULL RATE -                                        *
C*  XFPR FACTOR                                                              *
C*****************************************************************************
C
      COMMON /I/ I
      COMMON /INO/ INO(150)
      COMMON /LDERV/ LDERV
      COMMON /MXI/ MXI
      COMMON /TDFPR/ TDFPR(150)
      COMMON /TDXFPR/ TDXFPR
C
C
      TEM01=0.
      DO 210 IXXX1=1,MXI
        I=INO(IXXX1)
        TEM01=TEM01+TDFPR(I)
  210 CONTINUE
      TDXFPR=TEM01
C
      RETURN
      END
```

```
      SUBROUTINE DRTS
C                                                          810625 085524541
C*****************************************************************************
C*  COMPUTES ITEM BASE REPAIR FRACTION                                      *
C*  -RTS(I) FACTOR - DRTS                                                   *
C*****************************************************************************
C
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      COMMON /COND/ COND(150)
      COMMON /FINC/ FINC
      COMMON /I/ I
      COMMON /IDRTS/ IDRTS(150)
      COMMON /INO/ INO(150)
      COMMON /LDERV/ LDERV
      COMMON /LDRTS/ LDRTS
      COMMON /MXI/ MXI
      COMMON /NRTS/ NRTS(150)
      REAL NRTS
      COMMON /TDRTS/ TDRTS(150)
C
C
      DO 250 IXXX1=1,MXI
        I=INO(IXXX1)
        TDRTS(I)=0.
        IF(.NOT.(COND(I).EQ.1.)) GO TO 210
          CR=AMIN1(FINC,1.)
          CN=0.
          CC=-1.*CR
  210   CONTINUE
        IF(.NOT.(COND(I).LT.1.)) GO TO 220
          CR=AMIN1(FINC,NRTS(I))
          CN=-1.*CR
          CC=0.
  220   CONTINUE
        IF(.NOT.(CR.GT.0.)) GO TO 230
          TDRTS(I)=(CHLCC(CC,CR,CN,I))/1000000.
  230   CONTINUE
        IF(.NOT.(TDRTS(I).GT.-0.000001)) GO TO 240
          TDRTS(I)=0.
  240   CONTINUE
  250 CONTINUE
C
      DO 999 IXXX=1,MXI
        IDRTS (IXXX)=INO   (IXXX)
  999 CONTINUE
      LD=LDRTS
```

```
      IF (PRNTXX.NE.0) LD=MAX0(LD,LDERV )
      CALL TDSORT(TDRTS ,IDRTS ,LD,MXI    )
C
      RETURN
      END
```

```
      SUBROUTINE DNRTS
C                                                          810625 085527311
C*****************************************************************************
C*  COMPUTES ITEM DEPOT REPAIR FRACTION -                                    *
C*  NRTS(I) FACTOR - DNRTS                                                   *
C*****************************************************************************
C
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      COMMON /COND/ COND(150)
      COMMON /FINC/ FINC
      COMMON /I/ I
      COMMON /IDNRTS/ IDNRTS(150)
      COMMON /INO/ INO(150)
      COMMON /LDERV/ LDERV
      COMMON /LDNRTS/ LDNRTS
      COMMON /MXI/ MXI
      COMMON /RTS/ RTS(150)
      COMMON /TDNRTS/ TDNRTS(150)
C
C
      DO 250 IXXX1=1,MXI
        I=INO(IXXX1)
        TDNRTS(I)=0.
        IF(.NOT.(COND(I).EQ.1.)) GO TO 210
          CN=AMIN1(FINC,1.)
          CR=0.
          CC=-1.*CN
  210   CONTINUE
        IF(.NOT.(COND(I).LT.1.)) GO TO 220
          CN=AMIN1(FINC,RTS(I))
          CR=-1.*CN
          CC=0.
  220   CONTINUE
        IF(.NOT.(CN.GT.0.)) GO TO 230
          TDNRTS(I)=(CHLCC(CC,CR,CN,I))/1000000.
  230   CONTINUE
        IF(.NOT.(TDNRTS(I).GT.-0.000001)) GO TO 240
          TDNRTS(I)=0.
  240   CONTINUE
  250 CONTINUE
C
      DO 999 IXXX=1,MXI
        IDNRTS(IXXX)=INO    (IXXX)
  999 CONTINUE
      LD=LDNRTS
      IF (PRNTXX.NE.0) LD=MAX0(LD,LDERV )
```

```
      CALL TDSORT(TDNRTS,IDNRTS,LD,MXI    )
C
      RETURN
      END
```

```
      SUBROUTINE DCOND
C                                                          810625 085529415
C*****************************************************************************
C*  COMPUTES ITEM CONDEMNATION RATE -                                        *
C*  COND(I) FACTOR - DCOND                                                   *
C*****************************************************************************
C
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      COMMON /COND/ COND(150)
      COMMON /FINC/ FINC
      COMMON /I/ I
      COMMON /IDCOND/ IDCOND(150)
      COMMON /INO/ INO(150)
      COMMON /LDCOND/ LDCOND
      COMMON /LDERV/ LDERV
      COMMON /MXI/ MXI
      COMMON /NRTS/ NRTS(150)
      REAL NRTS
      COMMON /RTS/ RTS(150)
      COMMON /TDCOND/ TDCOND(150)
C
C
      DO 250 IXXX1=1,MXI
        I=INO(IXXX1)
        TDCOND(I)=0.
        IF(.NOT.(COND(I).EQ.1.)) GO TO 210
          CC=0.
          CR=0.
          CN=0.
  210   CONTINUE
        IF(.NOT.(COND(I).LT.1.)) GO TO 220
          CC=AMIN1(FINC,1.-COND(I))
          CR=-1.*RTS(I)/(RTS(I)+NRTS(I))*CC
          CN=-1.*NRTS(I)/(RTS(I)+NRTS(I))*CC
  220   CONTINUE
        IF(.NOT.(CC.GT.0.)) GO TO 230
          TDCOND(I)=(CHLCC(CC,CR,CN,I))/1000000.
  230   CONTINUE
        IF(.NOT.(TDCOND(I).GT.-0.000001)) GO TO 240
          TDCOND(I)=0.
  240   CONTINUE
  250 CONTINUE
C
      DO 999 IXXX=1,MXI
        IDCOND(IXXX)=INO    (IXXX)
  999 CONTINUE
```

```
      LD=LDCOND
      IF (PRNTXX.NE.0) LD=MAX0(LD,LDERV )
      CALL TDSORT(TDCOND,IDCOND,LD,MXI    )
C
      RETURN
      END
```

```
      SUBROUTINE DSRU
C                                                          810625 085532708
C*****************************************************************************
C*. ATU MOD JRC - 5 JUN 80                                                  *
C*  COMPUTES SENSITIVITY ON WHICH SRUS                                      *
C*  SHOULD BE LRUS - DSRU                                                   *
C*****************************************************************************
C
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      COMMON /A/ A(150,4,3)
      INTEGER A
      COMMON /B/ B
      INTEGER B
      COMMON /BAA/ BAA
      COMMON /BCMH/ BCMH(150)
      COMMON /BLR/ BLR
      COMMON /BMF/ BMF
      COMMON /BMH/ BMH(150)
      COMMON /BRCT/ BRCT
      COMMON /BTYPE/ BTYPE(10)
      INTEGER BTYPE
      COMMON /CIMF/ CIMF(10)
      COMMON /COND/ COND(150)
      COMMON /CPPC/ CPPC
      COMMON /CPPD/ CPPD(3)
      COMMON /CRCT/ CRCT
      COMMON /CSE/ CSE(120)
      COMMON /DAA/ DAA
      COMMON /DLR/ DLR
      COMMON /DMF/ DMF
      COMMON /DMH/ DMH(150)
      COMMON /DRCT/ DRCT(3)
      COMMON /ERHBI/ ERHBI(150,10)
      COMMON /FAIL/ FAIL(150,10)
      COMMON /FPR/ FPR(150)
      COMMON /I/ I
      COMMON /IDSRU/ IDSRU(150)
      COMMON /INO/ INO(150)
      COMMON /IRMIN/ IRMIN(150,4)
      COMMON /IRMT/ IRMT
      COMMON /ISCA/ ISCA(150)
      REAL ISCA
      COMMON /ISET/ ISET(120,10)
      REAL ISET
      COMMON /ISETD/ ISETD(120)
      REAL ISETD
```

```
COMMON /L/ L
COMMON /LDERV/ LDERV
COMMON /LDSRU/ LDSRU
COMMON /LO/ LO(10)
COMMON /LRU/ LRU(150)
COMMON /LT/ LT
COMMON /MSE/ MSE(120)
REAL MSE
COMMON /MXI/ MXI
COMMON /MXIRMT/ MXIRMT
COMMON /MXLT/ MXLT
COMMON /MXNP/ MXNP
COMMON /MXNS/ MXNS
COMMON /NBC/ NBC(10)
REAL NBC
COMMON /NHB/ NHB(10)
COMMON /NHI/ NHI(150)
COMMON /NITEM/ NITEM(150,5)
REAL NITEM
COMMON /NJA/ NJA(150,4)
COMMON /NP/ NP
COMMON /NRM/ NRM(150)
COMMON /NRTS/ NRTS(150)
REAL NRTS
COMMON /NRUC/ NRUC
REAL NRUC
COMMON /NS/ NS
COMMON /OFMCA/ OFMCA(150)
COMMON /OST/ OST(3)
COMMON /OSTC/ OSTC
COMMON /PIUP/ PIUP
COMMON /QSA/ QSA(150,4,3)
COMMON /RM/ RM(150)
COMMON /RMI/ RMI(150,10)
INTEGER RMI
COMMON /RSCA/ RSCA(150)
COMMON /RTS/ RTS(150)
COMMON /SA/ SA
COMMON /SAT/ SAT(10)
COMMON /TDSRU/ TDSRU(150)
COMMON /TISQ/ TISQ(150)
COMMON /TNB/ TNB(10)
COMMON /TOTT/ TOTT(5)
COMMON /UP/ UP(150)
COMMON /USE/ USE(120,10)
COMMON /USED/ USED(120)
COMMON /WT/ WT(150)
```

```
      COMMON /XFPR/ XFPR
      COMMON /XITEMQ/ XITEMQ(150)
      COMMON /XUC/ XUC
      COMMON /YRSQ/ YRSQ(150)
      DIMENSION DINFB(150,10)
      DIMENSION DINFD(150)
      DIMENSION DNHNFB(150,10)
      DIMENSION DNHNFD(150)
      REAL NXXX2
      DIMENSION RNHMH(150,10)
C
C
      DO 520 IXXX1=1,MXI
        I=INO(IXXX1)
        TDSRU(I)=0.
        IF(.NOT.(NHI(I).NE.0)) GO TO 510
          IF(.NOT.(LRU(I).EQ.0.AND.LRU(NHI(I)).EQ.1)) GO TO 500
            DO 260 NS=1,MXNS
              IF(.NOT.(BTYPE(NS).EQ.3)) GO TO 210
                DNHNFB(I,NS)=(FAIL(NHI(I),NS)-FAIL(I,NS))*(1.+FPR(NHI(I)
     +            ))*OSTC
                DINFB(I,NS)=FAIL(I,NS)*(1.+FPR(NHI(I)))*OSTC
  210         CONTINUE
              IF(.NOT.(BTYPE(NS).NE.3)) GO TO 240
                TEM01=0.
                DO 220 B=1,MXNS
                  IF(.NOT.(NHB(B).EQ.NS)) GO TO 220
                  TEM01=TEM01+AMAX1((FAIL(NHI(I),B)-FAIL(I,B)),0.)*
     +              NBC(B)
  220           CONTINUE
                DNHNFB(I,NS)=AMAX1((FAIL(NHI(I),NS)-FAIL(I,NS)),0.)*
     +            ((FPR(NHI(I))*XFPR+RTS(NHI(I)))*BRCT+(NRTS(NHI(I))+
     +            COND(NHI(I)))*OST(LO(NS)))+CIMF(NS)*TEM01*((RTS(NHI(I)
     +            )+FPR(NHI(I))*XFPR)*CRCT+(NRTS(NHI(I))+COND(NHI(I)))*
     +            (OST(LO(NS))+U(FPR(NHI(I))*XFPR)*CRCT))
                TEM02=0.
                DO 230 B=1,MXNS
                  IF(.NOT.(NHB(B).EQ.NS)) GO TO 230
                  TEM02=TEM02+FAIL(I,B)*NBC(B)
  230           CONTINUE
                DINFB(I,NS)=FAIL(I,NS)*((FPR(NHI(I))*XFPR+RTS(I))*BRCT+
     +            (NRTS(I)+COND(I))*OST(LO(NS)))+CIMF(NS)*TEM02*((RTS(I)
     +            +FPR(NHI(I))*XFPR)*CRCT+(NRTS(I)+COND(I))*(OST(LO(NS))
     +            +U(FPR(NHI(I))*XFPR)*CRCT))
  240         CONTINUE
              RNHMH(I,NS)=0.
              IF(.NOT.(FAIL(NHI(I),NS).GT.0.001)) GO TO 250
```

```
            RNHMH(I,NS)=AMIN1(FAIL(I,NS)/FAIL(NHI(I),NS),1.)*
     +        ERHBI(NHI(I),NS)
250       CONTINUE
260     CONTINUE
        TEM03=0.
        DO 270 NS=1,MXNS
          TEM03=TEM03+AMAX1((FAIL(NHI(I),NS)-FAIL(I,NS)),0.)*TNB(NS)
     +      *NRTS(NHI(I))*DRCT(LO(NS))
270     CONTINUE
        DNHNFD(I)=TEM03
        TEM04=0.
        DO 280 NS=1,MXNS
          TEM04=TEM04+FAIL(I,NS)*TNB(NS)*NRTS(I)*DRCT(LO(NS))
280     CONTINUE
        DINFD(I)=TEM04
        TEM05=0.
        DO 290 NP=1,MXNP
          TEM05=TEM05+TOTT(NP)*NITEM(I,NP)
290     CONTINUE
        TEM06=0.
        DO 300 NS=1,MXNS
          TEM06=TEM06+TNB(NS)*F(DINFB(I,NS))
300     CONTINUE
        TEM07=0.
        DO 310 NS=1,MXNS
          TEM07=TEM07+AMIN1(FAIL(I,NS),FAIL(NHI(I),NS))*TNB(NS)
310     CONTINUE
        XITEMQ(I)=TEM05+TEM06+F(DINFD(I))-TISQ(I)+12.*NRUC*TEM07*
     +    (1.-COND(NHI(I)))-NRUC*YRSQ(I)
        TEM08=0.
        DO 320 NS=1,MXNS
          TEM08=TEM08+TNB(NS)*F(DNHNFB(I,NS))
320     CONTINUE
        TEM09=0.
        DO 330 NS=1,MXNS
          TEM09=TEM09+AMAX1((FAIL(NHI(I),NS)-FAIL(I,NS)),0.)*TNB(NS)
330     CONTINUE
        XITEMQ(NHI(I))=TEM08+F(DNHNFD(I))-TISQ(NHI(I))+12.*NRUC*
     +    TEM09*(1.-COND(NHI(I)))-NRUC*YRSQ(NHI(I))
        TEM10=0.
        DO 340 NS=1,MXNS
          TEM10=TEM10+AMAX1((FAIL(NHI(I),NS)-FAIL(I,NS)),0.)*TNB(NS)
340     CONTINUE
        TEMP1=12.*TEM10
        TEM11=0.
        DO 350 NS=1,MXNS
          TEM11=TEM11+AMIN1(FAIL(I,NS),FAIL(NHI(I),NS))*TNB(NS)
```

```
350       CONTINUE
          TEMP2=12.*TEM11*(1.-COND(NHI(I)))
          TEM12=0.
          DO 360 NS=1,MXNS
            TEM12=TEM12+TNB(NS)*F(DNHNFB(I,NS))
360       CONTINUE
          TEM13=0.
          DO 370 NS=1,MXNS
            TEM13=TEM13+TNB(NS)*F(DINFB(I,NS))
370       CONTINUE
          TDSRUA=(TEM12+F(DNHNFD(I)))*(UP(NHI(I))-UP(I))*XLEARN(NHI(I)
     +      )*XUC-ISCA(NHI(I))+(TEM13+F(DINFD(I)))*UP(I)*XLEARN(I)*
     +      XUC-ISCA(I)+TEMP1*AMAX1((UP(NHI(I))-UP(I)),0.)*XUC*((NRUC*
     +      XLEARN(NHI(I))+(PIUP-NRUC))*COND(NHI(I))+PIUP*(1.-
     +      COND(NHI(I)))*RM(NHI(I)))-RSCA(NHI(I))+TEMP2*UP(I)*XUC*
     +      ((NRUC*XLEARN(I)+(PIUP-NRUC))*COND(I)+PIUP*(1.-COND(I))*
     +      RM(I))-RSCA(I)
          TEM14=0.
          DO 380 NS=1,MXNS
            TEM14=TEM14+AMAX1((FAIL(NHI(I),NS)-FAIL(I,NS)),0.)*TNB(NS)
     +        *(((1.+FPR(NHI(I))*XFPR)*BCMH(NHI(I))+RTS(NHI(I))*
     +        BMH(NHI(I)))*BMF*BLR+NRTS(NHI(I))*(DMH(NHI(I))*DMF*DLR+
     +        2.*CPPD(LO(NS))*(WT(NHI(I))-WT(I)))+COND(NHI(I))*
     +        CPPD(LO(NS))*(WT(NHI(I))-WT(I))+SAT(NS)*(1.+FPR(NHI(I))*
     +        XFPR)*2.*CPPC*(WT(NHI(I))-WT(I)))
380       CONTINUE
          TEM15=0.
          DO 390 NS=1,MXNS
            TEM15=TEM15+AMIN1(FAIL(NHI(I),NS),FAIL(I,NS))*TNB(NS)*
     +        (((1.+FPR(NHI(I))*XFPR)*BCMH(I)+RTS(I)*BMH(I))*BMF*BLR+
     +        NRTS(I)*(DMH(I)*DMF*DLR+2.*CPPD(LO(NS))*WT(I))+COND(I)*
     +        CPPD(LO(NS))*WT(I)+SAT(NS)*(1.+FPR(NHI(I))*XFPR)*2.*
     +        CPPC*WT(I))
390       CONTINUE
          TDSRUB=12.*PIUP*TEM14-OFMCA(NHI(I))+12.*PIUP*TEM15-OFMCA(I)
          NXXX1=NRM(NHI(I))
          TDSRUC=0.
          IF(.NOT.(NXXX1.GT.0)) GO TO 470
            DO 450 IRMT=1,MXIRMT
              IF(.NOT.(IRMT.LE.NXXX1)) GO TO 460
              IF(.NOT.(IRMIN(NHI(I),IRMT).EQ.
     +          RMI(NHI(I),NS))) GO TO 440
                NXXX2=NJA(NHI(I),IRMT)
                IF(.NOT.(NXXX2.GT.0)) GO TO 430
                  DO 410 LT=1,MXLT
                    IF(.NOT.(LT.LE.NXXX2)) GO TO 420
                    L=A(NHI(I),IRMT,LT)
```

```
                    DO 400 NS=1,MXNS
                    TDSRUC=TDSRUC+U(QSA(NHI(I),IRMT,LT)-
     +                AINT(QSA(NHI(I),IRMT,LT)/100.)*100.)*TNB(NS)*
     +                (USE(L,NS)*RNHMH(I,NS)*ISET(L,NS)/BAA+USED(L)*
     +                AMIN1(FAIL(I,NS),FAIL(NHI(I),NS))*NRTS(NHI(I))*
     +                DMH(NHI(I))*DMF*ISETD(L)/DAA)*CSE(L)*(1.+PIUP*
     +                MSE(L))
  400               CONTINUE
  410             CONTINUE
  420             CONTINUE
  430           CONTINUE
  440         CONTINUE
  450       CONTINUE
  460       CONTINUE
            TDSRUC=-1.*TDSRUC
  470     CONTINUE
          TEM16=0.
          DO 480 NS=1,MXNS
            TEM16=TEM16+U(FAIL(I,NS))*SAT(NS)*TNB(NS)
  480     CONTINUE
          TDSRUD=PIUP*SA*TEM16
          TDSRU(I)=(TDSRUA+TDSRUB+TDSRUC+TDSRUD)/1000000.
          IF(.NOT.(TDSRU(I).GT.-0.000001)) GO TO 490
            TDSRU(I)=0.
  490     CONTINUE
  500   CONTINUE
  510 CONTINUE
  520 CONTINUE
C
      DO 999 IXXX=1,MXI
        IDSRU (IXXX)=INO   (IXXX)
  999 CONTINUE
      LD=LDSRU
      IF (PRNTXX.NE.0) LD=MAX0(LD,LDERV )
      CALL TDSORT(TDSRU ,IDSRU ,LD,MXI   )
C
      RETURN
      END
```

```
      SUBROUTINE DXMIL
C                                                          810625 085604052
C*****************************************************************************
C*  COMPUTES GLOBAL SENSITIVITY WITH RESPECT TO                              *
C*  MOD/I LABOR HOURS                                                        *
C*****************************************************************************
C
      COMMON /FINC/ FINC
      COMMON /FR/ FR(3,5)
      COMMON /IA/ IA
      COMMON /LDERV/ LDERV
      COMMON /M/ M
      COMMON /MILR/ MILR(3)
      REAL MILR
      COMMON /MIMH/ MIMH(4,3,5)
      REAL MIMH
      COMMON /MXM/ MXM
      COMMON /MXNP/ MXNP
      COMMON /MXNS/ MXNS
      COMMON /NIA/ NIA
      COMMON /NP/ NP
      COMMON /NPLT/ NPLT(5,10)
      REAL NPLT
      COMMON /NS/ NS
      COMMON /TDMIL/ TDMIL
      COMMON /TDXMIL/ TDXMIL
      COMMON /TNB/ TNB(10)
      COMMON /XMIL/ XMIL
C
C
      TEM04=0.
      DO 240 NP=1,MXNP
        TEM01=0.
        DO 210 NS=1,MXNS
          TEM01=TEM01+TNB(NS)*NPLT(NP,NS)
  210   CONTINUE
        TEM03=0.
        DO 230 M=1,MXM
          TEM02=0.
          DO 220 IA=1,NIA
            TEM02=TEM02+MIMH(IA,M,NP)*XMIL
  220     CONTINUE
          TEM03=TEM03+FR(M,NP)*MILR(M)*TEM02
  230   CONTINUE
        TEM04=TEM04+TEM01*TEM03/1000000.
  240 CONTINUE
      TDMIL=TEM04
```

```
      TDXMIL=FINC*TDMIL
C
      RETURN
      ENI
```

```
      SUBROUTINE OTAB1
C                                                          810625 085608386
C*****************************************************************************
C*  PRINTS A SUMMARY BY TOP-LEVEL                                            *
C*  COST ELEMENTS                                                            *
C*  ATU MOD LCR - 28 MAY 80                                                  *
C*****************************************************************************
C
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      COMMON /FSEDC/ FSEDC
      COMMON /IIMC/ IIMC
      REAL IIMC
      COMMON /ISC/ ISC
      REAL ISC
      COMMON /MIC/ MIC
      REAL MIC
      COMMON /MTRC/ MTRC
      REAL MTRC
      COMMON /OC/ OC
      COMMON /OFMC/ OFMC
      COMMON /ONMC/ ONMC
      COMMON /RSC/ RSC
      COMMON /SEDC/ SEDC
      COMMON /SEPC/ SEPC
      COMMON /STDC/ STDC
      COMMON /TERMH/ TERMH
      COMMON /TERMI/ TERMI
      COMMON /TSEC/ TSEC
    1 FORMAT(1H1,15X,50HOUTPUT TABLE 1: SUMMARY BY TOP-LEVEL COST ELEMEN
     +TS/24X,33H(IN MILLIONS OF CONSTANT DOLLARS)//8X,12HPROGRAM COST,5X
     +,11HDEVELOPMENT,3X,10HPRODUCTION,4X,7HSUPPORT,12X,5HTOTAL//)
    2 FORMAT(2X,20HFULL SCALE ENG. DEVT,5X,F6.2,10X,F4.2,8X,F4.2,12X,F6.
     +2)
    3 FORMAT(2X,15HPRODUCTION:PME ,12X,F4.2,8X,F6.2,8X,F4.2,12X,F6.2)
    4 FORMAT(13X,7HOTHER* ,9X,F4.2,8X,F6.2,8X,F4.2,12X,F6.2)
    5 FORMAT(2X,10HOPERATIONS,17X,F4.2,10X,F4.2,6X,F6.2,12X,F6.2)
    6 FORMAT(2X,16HMOD/INSTALLATION,11X,F4.2,8X,F6.2,8X,F4.2,12X,F6.2)
    7 FORMAT(2X,17HSPARES:INVESTMENT,10X,F4.2,8X,F6.2,8X,F4.2,12X,F6.2)
    8 FORMAT(9X,11HREPLACEMENT,9X,F4.2,10X,F4.2,6X,F6.2,12X,F6.2)
    9 FORMAT(2X,17HSUPPORT EQUIPMENT,8X,F6.2,8X,F6.2,8X,F4.2,12X,F6.2)
   10 FORMAT(2X,12HON EQUIPMENT,15X,F4.2,10X,F4.2,6X,F6.2,12X,F6.2)
   11 FORMAT(2X,13HOFF EQUIPMENT,14X,F4.2,10X,F4.2,6X,F6.2,12X,F6.2)
   12 FORMAT(2X,8HTRAINING,19X,F4.2,10X,F4.2,6X,F6.2,12X,F6.2)
   13 FORMAT(2X,20HINVENTORY MANAGEMENT,7X,F4.2,10X,F4.2,6X,F6.2,12X,F6.
     +2)
   14 FORMAT(2X,16HTECHNICAL ORDERS,11X,F4.2,8X,F6.2,8X,F4.2,12X,F6.2/)
```

```
   15 FORMAT(12X,10HTOTAL COST,5X,F6.2,8X,F6.2,6X,F6.2,10X,F8.2)
   16 FORMAT(/////48H * "OTHER" INCLUDES SYSTEMS TEST, SYSTEM/PROJECT,35
     +H MANAGEMENT, DATA (EXCEPT TECHNICAL,36H ORDERS), AND INDUSTRIAL F
     +ACILITIES.)
C
C
C
      TEMP1=TERMH/1000000.
      TEMP2=TERMI/1000000.
      TEMP3=OC/1000000.
      TEMP4=MIC/1000000.
      TEMP5=ISC/1000000.
      TEMP6=RSC/1000000.
      TEMP7=SEDC/1000000.
      TEMP8=SEPC/1000000.
      TEMP9=TSEC/1000000.
      TEMPA=ONMC/1000000.
      TEMPB=OFMC/1000000.
      TEMPC=MTRC/1000000.
      TEMPD=IIMC/1000000.
      TEMPE=STDC/1000000.
      TEMPF=FSEPC/1000000.
      T1=TEMP1+TEMP2+TEMP4+TEMP5+TEMP8+TEMPE
      T2=TEMP3+TEMP6+TEMPA+TEMPB+TEMPC+TEMPD
      T4=TEMPF+TEMP7
      T3=T4+T1+T2
      ZERO=0.00
      IF(PRNTXX.NE.0) WRITE( 7, 1)
      IF(PRNTXX.NE.1) WRITE(06, 1)
      IF(PRNTXX.NE.0) WRITE( 7, 2) TEMPF,ZERO,ZERO,TEMPF
      IF(PRNTXX.NE.1) WRITE(06, 2) TEMPF,ZERO,ZERO,TEMPF
      IF(PRNTXX.NE.0) WRITE( 7, 3) ZERO,TEMP1,ZERO,TEMP1
      IF(PRNTXX.NE.1) WRITE(06, 3) ZERO,TEMP1,ZERO,TEMP1
      IF(PRNTXX.NE.0) WRITE( 7, 4) ZERO,TEMP2,ZERO,TEMP2
      IF(PRNTXX.NE.1) WRITE(06, 4) ZERO,TEMP2,ZERO,TEMP2
      IF(PRNTXX.NE.0) WRITE( 7, 5) ZERO,ZERO,TEMP3,TEMP3
      IF(PRNTXX.NE.1) WRITE(06, 5) ZERO,ZERO,TEMP3,TEMP3
      IF(PRNTXX.NE.0) WRITE( 7, 6) ZERO,TEMP4,ZERO,TEMP4
      IF(PRNTXX.NE.1) WRITE(06, 6) ZERO,TEMP4,ZERO,TEMP4
      IF(PRNTXX.NE.0) WRITE( 7, 7) ZERO,TEMP5,ZERO,TEMP5
      IF(PRNTXX.NE.1) WRITE(06, 7) ZERO,TEMP5,ZERO,TEMP5
      IF(PRNTXX.NE.0) WRITE( 7, 8) ZERO,ZERO,TEMP6,TEMP6
      IF(PRNTXX.NE.1) WRITE(06, 8) ZERO,ZERO,TEMP6,TEMP6
      IF(PRNTXX.NE.0) WRITE( 7, 9) TEMP7,TEMP8,ZERO,TEMP9
      IF(PRNTXX.NE.1) WRITE(06, 9) TEMP7,TEMP8,ZERO,TEMP9
      IF(PRNTXX.NE.0) WRITE( 7,10) ZERO,ZERO,TEMPA,TEMPA
      IF(PRNTXX.NE.1) WRITE(06,10) ZERO,ZERO,TEMPA,TEMPA
```

```
      IF(PRNTXX.NE.0) WRITE( 7,11) ZERO,ZERO,TEMPB,TEMPB
      IF(PRNTXX.NE.1) WRITE(06,11) ZERO,ZERO,TEMPB,TEMPB
      IF(PRNTXX.NE.0) WRITE( 7,12) ZERO,ZERO,TEMPC,TEMPC
      IF(PRNTXX.NE.1) WRITE(06,12) ZERO,ZERO,TEMPC,TEMPC
      IF(PRNTXX.NE.0) WRITE( 7,13) ZERO,ZERO,TEMPD,TEMPD
      IF(PRNTXX.NE.1) WRITE(06,13) ZERO,ZERO,TEMPD,TEMPD
      IF(PRNTXX.NE.0) WRITE( 7,14) ZERO,TEMPE,ZERO,TEMPE
      IF(PRNTXX.NE.1) WRITE(06,14) ZERO,TEMPE,ZERO,TEMPE
      IF(PRNTXX.NE.0) WRITE( 7,15) T4,T1,T2,T3
      IF(PRNTXX.NE.1) WRITE(06,15) T4,T1,T2,T3
      IF(PRNTXX.NE.0) WRITE( 7,16)
C
      RETURN
      END
```

```
      SUBROUTINE CTAB2
C                                                                  810625 085622166
C*****************************************************************************
C*  PRINTS PLATFORM MODIFICATION/INSTALLATION COSTS                          *
C*****************************************************************************
C
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      COMMON /AKIT/ AKIT(4,5)
      COMMON /FR/ FR(3,5)
      COMMON /IA/ IA
      COMMON /M/ M
      COMMON /MIFIX/ MIFIX(3,5)
      REAL MIFIX
      COMMON /MILR/ MILR(3)
      REAL MILR
      COMMON /MIMH/ MIMH(4,3,5)
      REAL MIMH
      COMMON /MXM/ MXM
      COMMON /MXNP/ MXNP
      COMMON /MXNS/ MXNS
      COMMON /NIA/ NIA
      COMMON /NP/ NP
      COMMON /NPLT/ NPLT(5,10)
      REAL NPLT
      COMMON /NS/ NS
      COMMON /PNOUN/ PNOUN(5,12)
      COMMON /TMIL/ TMIL
      COMMON /TNB/ TNB(10)
      COMMON /XMIL/ XMIL
    1 FORMAT(1H1 30X,56HOUTPUT TABLE 2: PLATFORM MODIFICATION/INSTALLATI
     +ON COSTS/37X,33H(IN MILLIONS OF CONSTANT DOLLARS)////30X,45H***REC
     +URRING MOD/I COST TOTALS BY PLATFORM***//26X,5HFIXED,22X,6HRETRO-,
     +3X,5HPRDC-,10X,1H*/3X,5HPLAT-,18X,5HPLAT.,4X,5HA-KIT,13X,3HFIT,6X,
     +4HTION,11X,1H*,1X,30HA-KIT PLUS LABOR COSTS BY AREA/3X,4HFORM,19X,
     +5HPREP/,4X,6HEQUIP-,3X,5HMOD/I,4X,5HMOD/I,4X,5HMOD/I,10X,1H*,1X,35
     +(1H-)/3X,5HINDEX,1X,13HPLATFORM NAME,4X,5HRSTR.,4X,4HMENT,5X,5HLAB
     +OR,4X,5HTOTAL,4X,5HTOTAL,4X,5HTOTAL,1X,1H*,1X,7HANTENNA,2X,8HELEC.
     +BOX,2X,7HCNTL.HD,2X,7HCABLING/3X,4H(NP)/)
    2 FORMAT(3X,I3,2X,12A1,3X,6(F8.3,1X),1X,F8.3,2X,F8.3,1X,F8.3,1X,F8.3
     +)
    3 FORMAT(/4X,18(1H-),1X,6(8(1H-),1X),1X,8(1H-),2X,8(1H-),1X,8(1H-),1
     +X,8(1H-)//5X,11HCOST TOTALS,6X,6(F9.3),1X,F9.3,1X,3F9.3)
C
C
C
C.....ONLY PRINT THIS TABLE IF OFF-LINE OUTPUT WAS REQUESTED
```

```
      IF(PRNTXX.EQ.0) RETURN
C
      WRITE( 7, 1)
      T11=0.
      T12=0.
      TMIL=0.
      T14=0.
      T15=0.
      T16=0.
      T17=0.
      T18=0.
      T19=0.
      T20=0.
      DO 330 NP=1,MXNP
        TEM01=0.
        DO 210 NS=1,MXNS
          TEM01=TEM01+TNB(NS)*NPLT(NP,NS)
  210   CONTINUE
        TPLT=TEM01
        TEM02=0.
        DO 220 M=1,MXM
          TEM02=TEM02+FR(M,NP)*(MIFIX(M,NP)*1000.)
  220   CONTINUE
        T1=TPLT*TEM02/1000000.
        TEM03=0.
        DO 230 IA=1,NIA
          TEM03=TEM03+AKIT(IA,NP)
  230   CONTINUE
        T2=TPLT*TEM03/1000000.
        TEM05=0.
        DO 250 M=1,MXM
          TEM04=0.
          DO 240 IA=1,NIA
            TEM04=TEM04+MIMH(IA,M,NP)*XMIL
  240     CONTINUE
          TEM05=TEM05+FR(M,NP)*MILR(M)*TEM04
  250   CONTINUE
        T3=TPLT*TEM05/1000000.
        TEM06=0.
        DO 260 IA=1,NIA
          TEM06=TEM06+MIMH(IA,2,NP)*XMIL*MILR(2)+AKIT(IA,NP)
  260   CONTINUE
        TEM07=0.
        DO 270 IA=1,NIA
          TEM07=TEM07+MIMH(IA,3,NP)*XMIL*MILR(3)+AKIT(IA,NP)
  270   CONTINUE
        T4=TPLT*(FR(2,NP)*((MIFIX(2,NP)*1000.)+TEM06)+FR(3,NP)*
```

```
     +     ((MIFIX(3,NP)*1000.)+TEM07))/1000000.
           TEM08=0.
           DO 280 IA=1,NIA
             TEM08=TEM08+MIMH(IA,1,NP)*XMIL*MILR(1)+AKIT(IA,NP)
   280     CONTINUE
           T5=TPLT*FR(1,NP)*((MIFIX(1,NP)*1000.)+TEM08)/1000000.
           T6=T4+T5
           TEM09=0.
           DO 290 M=1,MXM
             TEM09=TEM09+FR(M,NP)*MIMH(1,M,NP)*XMIL*MILR(M)
   290     CONTINUE
           T7=TPLT*(TEM09+AKIT(1,NP))/1000000.
           TEM10=0.
           DO 300 M=1,MXM
             TEM10=TEM10+FR(M,NP)*MIMH(2,M,NP)*XMIL*MILR(M)
   300     CONTINUE
           T8=TPLT*(TEM10+AKIT(2,NP))/1000000.
           TEM11=0.
           DO 310 M=1,MXM
             TEM11=TEM11+FR(M,NP)*MIMH(3,M,NP)*XMIL*MILR(M)
   310     CONTINUE
           T9=TPLT*(TEM11+AKIT(3,NP))/1000000.
           TEM12=0.
           DO 320 M=1,MXM
             TEM12=TEM12+FR(M,NP)*MIMH(4,M,NP)*XMIL*MILR(M)
   320     CONTINUE
           T10=TPLT*(TEM12+AKIT(4,NP))/1000000.
           WRITE( 7, 2) NP,(PNOUN(NP,K1),K1=1,12),T1,T2,T3,T4,T5,T6,T7,T8,
     +     T9,T10
           T11=T11+T1
           T12=T12+T2
           TMIL=TMIL+T3
           T14=T14+T4
           T15=T15+T5
           T16=T16+T6
           T17=T17+T7
           T18=T18+T8
           T19=T19+T9
           T20=T20+T10
   330   CONTINUE
         WRITE( 7, 3) T11,T12,TMIL,T14,T15,T16,T17,T18,T19,T20
C
         RETURN
         END
```

```
      SUBROUTINE OTAB3A
C                                                          810625 085638712
C*****************************************************************************
C*  ATU MOD LCR - 21 MAY 80                                                  *
C*  PRINTS OPERATION AND LOGISTICS SUPPORT                                   *
C*  COST ELEMENTS - PART 1                                                   *
C*****************************************************************************
C
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      COMMON /AFC/ AFC
      COMMON /BAFC/ BAFC(6)
      COMMON /BISC/ BISC(6)
      COMMON /BOFMC/ BOFMC(6)
      COMMON /BOLC/ BOLC(6)
      COMMON /BONMC/ BONMC(6)
      COMMON /BRSC/ BRSC(6)
      COMMON /ISC/ ISC
      REAL ISC
      COMMON /ISCB/ ISCB
      REAL ISCB
      COMMON /ISCD/ ISCD
      REAL ISCD
      COMMON /OFMC/ OFMC
      COMMON /OFMCB/ OFMCB
      COMMON /OFMCD/ OFMCD
      COMMON /OLC/ OLC
      COMMON /ONMC/ ONMC
      COMMON /RSC/ RSC
    1 FORMAT(1H1/35X,62HOUTPUT TABLE 3:  OPERATION AND LOGISTICS SUPPORT
     + COST ELEMENTS/50X,33H(IN MILLIONS OF CONSTANT DOLLARS)//24X,1H!,2
     +7X,57H! INDEP   CIMF    SATEL   BASE  ! AIR     GROUND !  DEPOT/11
     +X,98HCOST ELEMENT ! INITIAL  RECURRING  TOTAL ! BASES   BASES   BA
     +SES   TOTAL ! BASES   BASES  !  TOTAL/24X,1H!,27X,1H!,31X,1H!,16X,
     +1H!/10X,110(1H-)/24X,1H!,27X,1H!,31X,1H!,16X,1H!)
    2 FORMAT(7X,18HOPERATIONS LABOR !,9X,2(F6.2,3X),1H!,3(F6.2,2X),F6.2,
     +1X,1H!,1X,2(F6.2,1X),1X,1H!)
    3 FORMAT(7X,10HADDED FUEL,7X,1H!,9X,2(F6.2,3X),1H!,3(F6.2,2X),F6.2,1
     +X,1H!,1X,2(F6.2,1X),1X,1H!)
    4 FORMAT(7X,18HINITIAL SPARES   !,1X,F6.2,11X,F6.2,3X,1H!,3(F6.2,2X)
     +,F6.2,1X,1H!,1X,2(F6.2,1X),1X,1H!,1X,F6.2)
    5 FORMAT(7X,18HREPLACE. SPARES  !,9X,2(F6.2,3X),1H!,3(F6.2,2X),F6.2,
     +1X,1H!,1X,2(F6.2,1X),1X,1H!)
    6 FORMAT(7X,18HON-EQUIP. MAINT. !,9X,2(F6.2,3X),1H!,3(F6.2,2X),F6.2,
     +1X,1H!,1X,2(F6.2,1X),1X,1H!)
    7 FORMAT(7X,18HOFF-EQUIP. MAINT.!,9X,2(F6.2,3X),1H!,3(F6.2,2X),F6.2,
     +1X,1H!,1X,2(F6.2,1X),1X,1H!,1X,F6.2)
```

```
C
C
C
C.....ONLY PRINT THIS TABLE IF OFF-LINE OUTPUT WAS REQUESTED
      IF(PRNTXX.EQ.0) RETURN
C
      WRITE( 7, 1)
      T1=OLC/1000000.
      T2=BOLC(1)/1000000.
      T3=BOLC(2)/1000000.
      T4=BOLC(3)/1000000.
      T5=BOLC(4)/1000000.
      T6=BOLC(5)/1000000.
      T7=BOLC(6)/1000000.
      WRITE( 7, 2) T1,T1,T2,T3,T4,T1,T5,T6
      T1=AFC/1000000.
      T2=BAFC(1)/1000000.
      T3=BAFC(2)/1000000.
      T4=BAFC(3)/1000000.
      T5=BAFC(4)/1000000.
      T6=BAFC(5)/1000000.
      T7=BAFC(6)/1000000.
      WRITE( 7, 3) T1,T1,T2,T3,T4,T1,T5,T6
      T1=ISC/1000000.
      T2=BISC(1)/1000000.
      T3=BISC(2)/1000000.
      T4=BISC(3)/1000000.
      T5=ISCB/1000000.
      T6=BISC(4)/1000000.
      T7=BISC(5)/1000000.
      T8=BISC(6)/1000000.
      T9=ISCD/1000000.
      WRITE( 7, 4) T1,T1,T2,T3,T4,T5,T6,T7,T9
      T1=RSC/1000000.
      T2=BRSC(1)/1000000.
      T3=BRSC(2)/1000000.
      T4=BRSC(3)/1000000.
      T5=BRSC(4)/1000000.
      T6=BRSC(5)/1000000.
      T7=BRSC(6)/1000000.
      WRITE( 7, 5) T1,T1,T2,T3,T4,T1,T5,T6
      T1=ONMC/1000000.
      T2=BONMC(1)/1000000.
      T3=BONMC(2)/1000000.
      T4=BONMC(3)/1000000.
      T5=BONMC(4)/1000000.
      T6=BONMC(5)/1000000.
```

```
      T7=BONMC(6)/1000000.
      WRITE( 7, 6) T1,T1,T2,T3,T4,T1,T5,T6
      T1=OFMC/1000000.
      T2=BOFMC(1)/1000000.
      T3=BOFMC(2)/1000000.
      T4=BOFMC(3)/1000000.
      T5=OFMCB/1000000.
      T6=BOFMC(4)/1000000.
      T7=BOFMC(5)/1000000.
      T8=BOFMC(6)/1000000.
      T9=OFMCD/1000000.
      WRITE( 7, 7) T1,T1,T2,T3,T4,T5,T6,T7,T9
C
      RETURN
      END
```

```
      SUBROUTINE OTAB3B
C                                                          810625 085650989
C*****************************************************************************
C*  ATU MOD LCR - 21 MAY 80                                                  *
C*  PRINTS OPERATION AND LOGISTICS SUPPORT                                   *
C*  COST ELEMENTS - PART 2                                                   *
C*****************************************************************************
C
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      COMMON /AFC/ AFC
      COMMON /BAFC/ BAFC(6)
      COMMON /BIIMC/ BIIMC(6)
      COMMON /BISC/ BISC(6)
      COMMON /BMTRC/ BMTRC
      COMMON /BOFMC/ BOFMC(6)
      COMMON /BOLC/ BOLC(6)
      COMMON /BONMC/ BONMC(6)
      COMMON /BPLAT/ BPLAT(10)
      INTEGER BPLAT
      COMMON /BRSC/ BRSC(6)
      COMMON /BSECC/ BSECC(6)
      COMMON /BSECP/ BSECP(6)
      COMMON /BTCDI/ BTCDI
      COMMON /BTDC/ BTDC(10)
      COMMON /BTDCA/ BTDCA
      COMMON /BTDCC/ BTDCC
      COMMON /BTDCG/ BTDCG
      COMMON /BTDCI/ BTDCI
      COMMON /BTDCM/ BTDCM
      COMMON /BTDCS/ BTDCS
      COMMON /BTDCT/ BTDCT
      COMMON /BTYPE/ BTYPE(10)
      INTEGER BTYPE
      COMMON /DMTRC/ DMTRC
      COMMON /DTDC/ DTDC
      COMMON /IIMC/ IIMC
      REAL IIMC
      COMMON /IIMCB/ IIMCB
      REAL IIMCB
      COMMON /IIMCD/ IIMCD
      REAL IIMCD
      COMMON /IIMCI/ IIMCI
      REAL IIMCI
      COMMON /IIMCR/ IIMCR
      REAL IIMCR
      COMMON /IMTRC/ IMTRC
```

```
      REAL IMTRC
      COMMON /ISC/ ISC
      REAL ISC
      COMMON /ISCB/ ISCB
      REAL ISCB
      COMMON /ISCD/ ISCD
      REAL ISCD
      COMMON /MTRC/ MTRC
      REAL MTRC
      COMMON /MXNS/ MXNS
      COMMON /NS/ NS
      COMMON /OFMC/ OFMC
      COMMON /OFMCB/ OFMCB
      COMMON /OFMCD/ OFMCD
      COMMON /OLC/ OLC
      COMMON /ONMC/ ONMC
      COMMON /RMTRC/ RMTRC
      COMMON /RSC/ RSC
      COMMON /SECBC/ SECBC
      COMMON /SECBP/ SECBP
      COMMON /SECC/ SECC
      COMMON /SECDC/ SECDC
      COMMON /SECDP/ SECDP
      COMMON /SECIC/ SECIC
      COMMON /SECIP/ SECIP
      COMMON /SECP/ SECP
      COMMON /SECRC/ SECRC
      COMMON /SECRP/ SECRP
      COMMON /STDC/ STDC
      COMMON /STDCI/ STDCI
      COMMON /STDCR/ STDCR
      COMMON /TNB/ TNB(10)
    1 FORMAT(7X,18HSUPPORT EQUIPMENT!,27X,1H!,31X,1H!,16X,1H!)
    2 FORMAT(7X,18H   COMMON        !,1X,F6.2,2X,2(F6.2,3X),1H!,3(F6.2,2
     +X),F6.2,1X,1H!,1X,2(F6.2,1X),1X,1H!,1X,F6.2)
    3 FORMAT(7X,18H   PECULIAR      !,1X,F6.2,2X,2(F6.2,3X),1H!,3(F6.2,2
     +X),F6.2,1X,1H!,1X,2(F6.2,1X),1X,1H!,1X,F6.2)
    4 FORMAT(7X,18HINVENTORY MANAG. !,1X,F6.2,2X,2(F6.2,3X),1H!,3(F6.2,2
     +X),F6.2,1X,1H!,1X,2(F6.2,1X),1X,1H!,1X,F6.2)
    5 FORMAT(7X,18HMAINT. TRAINING* !,1X,F6.2,2X,2(F6.2,3X),1H!,3(6H  --
     +  ,2X),F6.2,1X,1H!,1X,2(6H  --  ,1X),1X,1H!,1X,F6.2)
    6 FORMAT(7X,18HTECH. DATA       !,1X,F6.2,2X,2(F6.2,3X),1H!,3(F6.2,2
     +X),F6.2,1X,1H!,1X,2(F6.2,1X),1X,1H!,1X,F6.2)
    7 FORMAT(10X,110(1H-))
    8 FORMAT(24X,1H!,27X,1H!,31X,1H!,16X,1H!/12X,6HTOTALS,6X,1H!,1X,F6.2
     +,2X,2(F6.2,3X),1H!,3(F6.2,2X),F6.2,1X,1H!,1X,F6.2,1X,F6.2,2X,1H!,1
     +X,F6.2///)
```

```
    9 FORMAT(2X,1H(,1H*,47H MAINT. TRAINING IS ALLOCATED TO BASE TOTAL A
     +ND,58H DEPOT TOTAL BUT IS NOT FURTHER ALLOCATED AMONG BASE TYPES,/
     +/)
   10 FORMAT(24X,16HNUMBER OF BASES:/24X,16(1H-)//28X,9HINDEP. = ,F5.0,9
     +X,15HAIR BASES    = ,F5.0//28X,9HCIMF   = ,F5.0,9X,15HGROUND BASES
     + = ,F5.0/66X,5(1H-)/28X,9HSATEL. = ,F5.0,9X,15HTOTAL        = ,F5.
     +0/37X,5(1H-)/28X,9HTOTAL  = ,F5.0)
C
C
C
C.....ONLY PRINT THIS TABLE IF OFF-LINE OUTPUT WAS REQUESTED
      IF(PRNTXX.EQ.0) RETURN
C
      WRITE( 7, 1)
      T1=SECIC/1000000.
      T2=SECRC/1000000.
      T3=SECC/1000000.
      T4=BSECC(1)/1000000.
      T5=BSECC(2)/1000000.
      T6=BSECC(3)/1000000.
      T7=SECBC/1000000.
      T8=BSECC(4)/1000000.
      T9=BSECC(5)/1000000.
      T10=BSECC(6)/1000000.
      T11=SECDC/1000000.
      WRITE( 7, 2) T1,T2,T3,T4,T5,T6,T7,T8,T9,T11
      T1=SECIP/1000000.
      T2=SECRP/1000000.
      T3=SECP/1000000.
      T4=BSECP(1)/1000000.
      T5=BSECP(2)/1000000.
      T6=BSECP(3)/1000000.
      T7=SECBP/1000000.
      T8=BSECP(4)/1000000.
      T9=BSECP(5)/1000000.
      T10=BSECP(6)/1000000.
      T11=SECDP/1000000.
      WRITE( 7, 3) T1,T2,T3,T4,T5,T6,T7,T8,T9,T11
      T1=IIMCI/1000000.
      T2=IIMCR/1000000.
      T3=IIMC/1000000.
      T4=BIIMC(1)/1000000.
      T5=BIIMC(2)/1000000.
      T6=BIIMC(3)/1000000.
      T7=IIMCB/1000000.
      T8=BIIMC(4)/1000000.
      T9=BIIMC(5)/1000000.
```

```
      T10=BIIMC(6)/1000000.
      T11=IIMCD/1000000.
      WRITE( 7, 4) T1,T2,T3,T4,T5,T6,T7,T8,T9,T11
      T1=IMTRC/1000000.
      T2=RMTRC/1000000.
      T3=MTRC/1000000.
      T7=BMTRC/1000000.
      T11=DMTRC/1000000.
      WRITE( 7, 5) T1,T2,T3,T7,T11
      TEM01=0.
      DO 210 NS=1,MXNS
        IF(.NOT.(BTYPE(NS).EQ.1)) GO TO 210
        TEM01=TEM01+BTDC(NS)
  210 CONTINUE
      BTDCI=TEM01
      TEM02=0.
      DO 220 NS=1,MXNS
        IF(.NOT.(BTYPE(NS).EQ.2)) GO TO 220
        TEM02=TEM02+BTDC(NS)
  220 CONTINUE
      BTDCC=TEM02
      TEM03=0.
      DO 230 NS=1,MXNS
        IF(.NOT.(BTYPE(NS).EQ.3)) GO TO 230
        TEM03=TEM03+BTDC(NS)
  230 CONTINUE
      BTDCS=TEM03
      TEM04=0.
      DO 240 NS=1,MXNS
        TEM04=TEM04+BTDC(NS)
  240 CONTINUE
      BTDCT=TEM04
      TEM05=0.
      DO 250 NS=1,MXNS
        IF(.NOT.(BPLAT(NS).EQ.1)) GO TO 250
        TEM05=TEM05+BTDC(NS)
  250 CONTINUE
      BTDCA=TEM05
      TEM06=0.
      DO 260 NS=1,MXNS
        IF(.NOT.(BPLAT(NS).EQ.2)) GO TO 260
        TEM06=TEM06+BTDC(NS)
  260 CONTINUE
      BTDCG=TEM06
      TEM07=0.
      DO 270 NS=1,MXNS
        IF(.NOT.(BPLAT(NS).EQ.3)) GO TO 270
```

```
      TEM07=TEM07+BTDC(NS)
270 CONTINUE
    BTDCM=TEM07
    DTDC=STDC-BTDCT
    T1=STDCI/1000000.
    T2=STDCR/1000000.
    T3=STDC/1000000.
    T4=BTDCI/1000000.
    T5=BTDCC/1000000.
    T6=BTDCS/1000000.
    T7=BTDCT/1000000.
    T8=BTDCA/1000000.
    T9=BTDCG/1000000.
    T10=BTDCM/1000000.
    T11=DTDC/1000000.
    WRITE( 7, 6) T1,T2,T3,T4,T5,T6,T7,T8,T9,T11
    WRITE( 7, 7)
    TEMP1=(ISC+SECIC+SECIP+IMTRC+STDCI+IIMCI)/1000000.
    TEMP2=(OLC+AFC+RSC+ONMC+OFMC+SECRC+SECRP+RMTRC+STDCR+IIMCR)/
   +  1000000.
    TEMP3=(OLC+AFC+ISC+RSC+ONMC+OFMC+SECC+SECP+MTRC+STDC+IIMC)/
   +  1000000.
    TEMP4=(BOLC(1)+BAFC(1)+BISC(1)+BRSC(1)+BONMC(1)+BOFMC(1)+BSECC(1)+
   +  BSECP(1)+BIIMC(1)+BTCDI)/1000000.
    TEMP5=(BOLC(2)+BAFC(2)+BISC(2)+BRSC(2)+BONMC(2)+BOFMC(2)+BSECC(2)+
   +  BSECP(2)+BIIMC(2)+BTDCC)/1000000.
    TEMP6=(BOLC(3)+BAFC(3)+BISC(3)+BRSC(3)+BONMC(3)+BOFMC(3)+BSECC(3)+
   +  BSECP(3)+BIIMC(3)+BTDCS)/1000000.
    TEMP7=(OLC+AFC+ISCB+RSC+ONMC+OFMCB+SECBC+SECBP+IIMCB+BMTRC+BTDCT)/
   +  1000000.
    TEMP8=(BOLC(4)+BAFC(4)+BISC(4)+BRSC(4)+BONMC(4)+BOFMC(4)+BSECC(4)+
   +  BSECP(4)+BIIMC(4)+BTDCA)/1000000.
    TEMP9=(BOLC(5)+BAFC(5)+BISC(5)+BRSC(5)+BONMC(5)+BOFMC(5)+BSECC(5)+
   +  BSECP(5)+BIIMC(5)+BTDCG)/1000000.
    TEM10=(BOLC(6)+BAFC(6)+BISC(6)+BRSC(6)+BONMC(6)+BOFMC(6)+BSECC(6)+
   +  BSECP(6)+BIIMC(6)+BTDCM)/1000000.
    TEM11=(ISCD+OFMCD+SECDC+SECDP+IIMCD+DMTRC+DTDC)/1000000.
    WRITE( 7, 8) TEMP1,TEMP2,TEMP3,TEMP4,TEMP5,TEMP6,TEMP7,TEMP8,
   +  TEMP9,TEM11
    WRITE( 7, 9)
    TEM08=0.
    DO 280 NS=1,MXNS
      IF(.NOT.(BTYPE(NS).EQ.1)) GO TO 280
      TEM08=TEM08+TNB(NS)
280 CONTINUE
    TNIB=TEM08
    TEM09=0.
```

```
      DO 290 NS=1,MXNS
        IF(.NOT.(BTYPE(NS).EQ.2)) GO TO 290
        TEM09=TEM09+TNB(NS)
  290 CONTINUE
      TNCB=TEM09
      TEM10=0.
      DO 300 NS=1,MXNS
        IF(.NOT.(BTYPE(NS).EQ.3)) GO TO 300
        TEM10=TEM10+TNB(NS)
  300 CONTINUE
      TNSB=TEM10
      TEM11=0.
      DO 310 NS=1,MXNS
        IF(.NOT.(BPLAT(NS).EQ.1)) GO TO 310
        TEM11=TEM11+TNB(NS)
  310 CONTINUE
      TNAB=TEM11
      TEM12=0.
      DO 320 NS=1,MXNS
        IF(.NOT.(BPLAT(NS).EQ.2)) GO TO 320
        TEM12=TEM12+TNB(NS)
  320 CONTINUE
      TNGB=TEM12
      TEM13=0.
      DO 330 NS=1,MXNS
        IF(.NOT.(BPLAT(NS).EQ.3)) GO TO 330
        TEM13=TEM13+TNB(NS)
  330 CONTINUE
      TNMB=TEM13
      TEMPA=TNIB+TNCB+TNSB
      TEMPB=TNAB+TNGB+TNMB
      WRITE( 7,10) TNIB,TNAB,TNCB,TNGB,TNSB,TEMPB,TEMPA
C
      RETURN
      END
```

```
      SUBROUTINE OTAB3C
C                                                              810625 085702409
C*************************************************************************
C*  ATU MOD LCR - 21 MAY 80                                              *
C*  PRINTS OPERATION AND LOGISTICS SUPPORT                               *
C*  COST ELEMENTS - PART 3 - FOR TERMINAL OUTPUT ONLY                    *
C*************************************************************************
C
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      COMMON /AFC/ AFC
      COMMON /BAFC/ BAFC(6)
      COMMON /BIIMC/ BIIMC(6)
      COMMON /BISC/ BISC(6)
      COMMON /BOFMC/ BOFMC(6)
      COMMON /BOLC/ BOLC(6)
      COMMON /BONMC/ BONMC(6)
      COMMON /BPLAT/ BPLAT(10)
      INTEGER BPLAT
      COMMON /BRSC/ BRSC(6)
      COMMON /BSECC/ BSECC(6)
      COMMON /BSECP/ BSECP(6)
      COMMON /BTDC/ BTDC(10)
      COMMON /BTDCA/ BTDCA
      COMMON /BTDCG/ BTDCG
      COMMON /BTDCM/ BTDCM
      COMMON /BTDCT/ BTDCT
      COMMON /BTYPE/ BTYPE(10)
      INTEGER BTYPE
      COMMON /DMTRC/ DMTRC
      COMMON /DTDC/ DTDC
      COMMON /IIMC/ IIMC
      REAL IIMC
      COMMON /IIMCD/ IIMCD
      REAL IIMCD
      COMMON /IIMCI/ IIMCI
      REAL IIMCI
      COMMON /IIMCR/ IIMCR
      REAL IIMCR
      COMMON /IMTRC/ IMTRC
      REAL IMTRC
      COMMON /ISC/ ISC
      REAL ISC
      COMMON /ISCD/ ISCD
      REAL ISCD
      COMMON /MTRC/ MTRC
      REAL MTRC
```

```
      COMMON /MXNS/ MXNS
      COMMON /NS/ NS
      COMMON /OFMC/ OFMC
      COMMON /OFMCD/ OFMCD
      COMMON /OLC/ OLC
      COMMON /ONMC/ ONMC
      COMMON /RMTRC/ RMTRC
      COMMON /RSC/ RSC
      COMMON /SECC/ SECC
      COMMON /SECDC/ SECDC
      COMMON /SECDP/ SECDP
      COMMON /SECIC/ SECIC
      COMMON /SECIP/ SECIP
      COMMON /SECP/ SECP
      COMMON /SECRC/ SECRC
      COMMON /SECRP/ SECRP
      COMMON /STDC/ STDC
      COMMON /STDCI/ STDCI
      COMMON /STDCR/ STDCR
      COMMON /TNB/ TNB(10)
      REAL IT1
      REAL IT10
      REAL IT11
      REAL IT2
      REAL IT3
      REAL IT8
      REAL IT9
      REAL JT1
      REAL JT11
      REAL JT2
      REAL JT3
      REAL KT1
      REAL KT10
      REAL KT11
      REAL KT2
      REAL KT3
      REAL KT8
      REAL KT9
    1 FORMAT(1H1//9X,62HOUTPUT TABLE 3:  OPERATION AND LOGISTICS SUPPORT
     + COST ELEMENTS/23X,33H(IN MILLIONS OF CONSTANT DOLLARS)//18X,1H!,2
     +7X,25H! AIR      GROUND !  DEPOT/5X,66HCOST ELEMENT ! INITIAL  RECU
     +RRING  TOTAL ! BASES   BASES  !  TOTAL/18X,1H!,27X,1H!,16X,1H!/4X,
     +67(1H-)/18X,1H!,27X,1H!,16X,1H!)
    2 FORMAT(1X,18HOPERATIONS LABOR !,9X,2(F6.2,3X),1H!,1X,2(F6.2,1X),1X
     +,1H!)
    3 FORMAT(1X,10HADDED FUEL,7X,1H!,9X,2(F6.2,3X),1H!,1X,2(F6.2,1X),1X,
     +1H!)
```

```
    4 FORMAT(1X,18HINITIAL SPARES    !,1X,F6.2,11X,F6.2,3X,1H!,1X,2(F6.2,
     +1X),1X,1H!,1X,F6.2)
    5 FORMAT(1X,18HREPLACE. SPARES   !,9X,2(F6.2,3X),1H!,1X,2(F6.2,1X),1X
     +,1H!)
    6 FORMAT(1X,18HON-EQUIP. MAINT.  !,9X,2(F6.2,3X),1H!,1X,2(F6.2,1X),1X
     +,1H!)
    7 FORMAT(1X,18HOFF-EQUIP. MAINT.!,9X,2(F6.2,3X),1H!,1X,2(F6.2,1X),1X
     +,1H!,1X,F6.2)
    8 FORMAT(1X,18HSUPPORT EQUIPMENT!,27X,1H!,16X,1H!)
    9 FORMAT(1X,18H   COMMON         !,1X,F6.2,2X,2(F6.2,3X),1H!,1X,2(F6.
     +2,1X),1X,1H!,1X,F6.2)
   10 FORMAT(1X,18H   PECULIAR       !,1X,F6.2,2X,2(F6.2,3X),1H!,1X,2(F6.
     +2,1X),1X,1H!,1X,F6.2)
   11 FORMAT(1X,18HINVENTORY MANAG.  !,1X,F6.2,2X,2(F6.2,3X),1H!,1X,2(F6.
     +2,1X),1X,1H!,1X,F6.2)
   12 FORMAT(1X,18HMAINT. TRAINING   !,1X,F6.2,2X,2(F6.2,3X),1H!,16X,1H!,
     +1X,F6.2)
   13 FORMAT(1X,18HTECH. DATA        !,1X,F6.2,2X,2(F6.2,3X),1H!,1X,2(F6.
     +2,1X),1X,1H!,1X,F6.2)
   14 FORMAT(4X,74(1H-))
   15 FORMAT(6X,6HTOTALS,6X,1H!,1X,F6.2,2X,2(F6.2,3X),1H!,1X,2(F6.2,1X),
     +1X,1H!,1X,F6.2///)
   16 FORMAT(24X,16HNUMBER OF BASES:/24X,16(1H-)//28X,9HINDEP. = ,F5.0,9
     +X,15HAIR BASES    = ,F5.0//28X,9HCOMF   = ,F5.0,9X,15HGROUND BASES
     + = ,F5.0/66X,5(1H-)/28X,9HSATEL. = ,F5.0,9X,15HTOTAL        = ,F5.
     +0/37X,5(1H-)/28X,9HTOTAL  = ,F5.0)
C
C
C
      IF(PRNTXX.NE.1) WRITE(06, 1)
      AT1=OLC/1000000.
      AT5=BOLC(4)/1000000.
      AT6=BOLC(5)/1000000.
      AT7=BOLC(6)/1000000.
      IF(PRNTXX.NE.1) WRITE(06, 2) AT1,AT1,AT5,AT6
      BT1=AFC/1000000.
      BT5=BAFC(4)/1000000.
      BT6=BAFC(5)/1000000.
      BT7=BAFC(6)/1000000.
      IF(PRNTXX.NE.1) WRITE(06, 3) BT1,BT1,BT5,BT6
      CT1=ISC/1000000.
      CT6=BISC(4)/1000000.
      CT7=BISC(5)/1000000.
      CT8=BISC(6)/1000000.
      CT9=ICCD/1000000.
      IF(PRNTXX.NE.1) WRITE(06, 4) CT1,CT1,CT6,CT7,CT9
      DT1=RSC/1000000.
```

```
DT5=BRSC(4)/1000000.
DT6=BRSC(5)/1000000.
DT7=BRSC(6)/1000000.
IF(PRNTXX.NE.1) WRITE(06, 5) DT1,DT1,DT5,DT6
ET1=ONMC/1000000.
ET5=BONMC(4)/1000000.
ET6=BONMC(5)/1000000.
ET7=BONMC(6)/1000000.
IF(PRNTXX.NE.1) WRITE(06, 6) ET1,ET1,ET5,ET6
FT1=OFMC/1000000.
FT6=BOFMC(4)/1000000.
FT7=BOFMC(5)/1000000.
FT8=BOFMC(6)/1000000.
FT9=OFMCD/1000000.
IF(PRNTXX.NE.1) WRITE(06, 7) FT1,FT1,FT6,FT7,FT9
IF(PRNTXX.NE.1) WRITE(06, 8)
GT1=SECIC/1000000.
GT2=SECRC/1000000.
GT3=SECC/1000000.
GT8=BSECC(4)/1000000.
GT9=BSECC(5)/1000000.
GT10=BSECC(6)/1000000.
GT11=SECDC/1000000.
IF(PRNTXX.NE.1) WRITE(06, 9) GT1,GT2,GT3,GT8,GT9,GT11
HT1=SECIP/1000000.
HT2=SECRP/1000000.
HT3=SECP/1000000.
HT8=BSECP(4)/1000000.
HT9=BSECP(5)/1000000.
HT10=BSECP(6)/1000000.
HT11=SECDP/1000000.
IF(PRNTXX.NE.1) WRITE(06,10) HT1,HT2,HT3,HT8,HT9,HT11
IT1=IIMCI/1000000.
IT2=IIMCR/1000000.
IT3=IIMC/1000000.
IT8=BIIMC(4)/1000000.
IT9=BIIMC(5)/1000000.
IT10=BIIMC(6)/1000000.
IT11=IIMCD/1000000.
IF(PRNTXX.NE.1) WRITE(06,11) IT1,IT2,IT3,IT8,IT9,IT11
JT1=IMTRC/1000000.
JT2=RMTRC/1000000.
JT3=MTRC/1000000.
JT11=DMTRC/1000000.
IF(PRNTXX.NE.1) WRITE(06,12) JT1,JT2,JT3,JT11
TEM01=0.
DO 210 NS=1,MXNS
```

```
      IF(.NOT.(BPLAT(NS).EQ.1)) GO TO 210
      TEM01=TEM01+BTDC(NS)
210 CONTINUE
    BTDCA=TEM01
    TEM02=0.
    DO 220 NS=1,MXNS
      IF(.NOT.(BPLAT(NS).EQ.2)) GO TO 220
      TEM02=TEM02+BTDC(NS)
220 CONTINUE
    BTDCG=TEM02
    TEM03=0.
    DO 230 NS=1,MXNS
      IF(.NOT.(BPLAT(NS).EQ.3)) GO TO 230
      TEM03=TEM03+BTDC(NS)
230 CONTINUE
    BTDCM=TEM03
    DTDC=STDC-BTDCT
    KT1=STDCI/1000000.
    KT2=STDCR/1000000.
    KT3=STDC/1000000.
    KT8=BTDCA/1000000.
    KT9=BTDCG/1000000.
    KT10=BTDCM/1000000.
    KT11=DTDC/1000000.
    IF(PRNTXX.NE.1) WRITE(06,13) KT1,KT2,KT3,KT8,KT9,KT11
    IF(PRNTXX.NE.1) WRITE(06,14)
    TEMP1=(ISC+SECIC+SECIP+IMTRC+STDCI+IIMCI)/1000000.
    TEMP2=(OLC+AFC+RSC+CNMC+OFMC+SECRC+SECRP+RMTRC+STDCR+IIMCR)/
   +  1000000.
    TEMP3=(OLC+AFC+ISC+RSC+ONMC+OFMC+SECC+SECP+MTRC+STDC+IIMC)/
   +  1000000.
    TEMP8=(BOLC(4)+BAFC(4)+BISC(4)+BRSC(4)+BONMC(4)+BOFMC(4)+BSECC(4)+
   +  BSECP(4)+BIIMC(4)+BTDCA)/1000000.
    TEMP9=(BOLC(5)+BAFC(5)+BISC(5)+BRSC(5)+BONMC(5)+BOFMC(5)+BSECC(5)+
   +  BSECP(5)+BIIMC(5)+BTDCG)/1000000.
    TEM10=(BOLC(6)+BAFC(6)+BISC(6)+BRSC(6)+BONMC(6)+BOFMC(6)+BSECC(6)+
   +  BSECP(6)+BIIMC(6)+BTDCM)/1000000.
    TEM11=(ISCD+OFMCD+SECDC+SECDP+IIMCD+DMTRC+DTDC)/1000000.
    IF(PRNTXX.NE.1) WRITE(06,15) TEMP1,TEMP2,TEMP3,TEMP8,TEMP9,TEM11
    TEM04=0.
    DO 240 NS=1,MXNS
      IF(.NOT.(BTYPE(NS).EQ.1)) GO TO 240
      TEM04=TEM04+TNB(NS)
240 CONTINUE
    TNIB=TEM04
    TEM05=0.
    DO 250 NS=1,MXNS
```

```
        IF(.NOT.(BTYPE(NS).EQ.2)) GO TO 250
        TEM05=TEM05+TNB(NS)
  250 CONTINUE
      TNCB=TEM05
      TEM06=0.
      DO 260 NS=1,MXNS
        IF(.NOT.(BTYPE(NS).EQ.3)) GO TO 260
        TEM06=TEM06+TNB(NS)
  260 CONTINUE
      TNSB=TEM06
      TEM07=0.
      DO 270 NS=1,MXNS
        IF(.NOT.(BPLAT(NS).EQ.1)) GO TO 270
        TEM07=TEM07+TNB(NS)
  270 CONTINUE
      TNAB=TEM07
      TEM08=0.
      DO 280 NS=1,MXNS
        IF(.NOT.(BPLAT(NS).EQ.2)) GO TO 280
        TEM08=TEM08+TNB(NS)
  280 CONTINUE
      TNGB=TEM08
      TEM09=0.
      DO 290 NS=1,MXNS
        IF(.NOT.(BPLAT(NS).EQ.3)) GO TO 290
        TEM09=TEM09+TNB(NS)
  290 CONTINUE
      TNMB=TEM09
      TEMPA=TNIB+TNCB+TNSB
      TEMPB=TNAB+TNGB+TNMB
      IF(PRNTXX.NE.1) WRITE(06,16) TNIB,TNAB,TNCB,TNGB,TNSB,TEMPB,TEMPA
C
      RETURN
      END
```

```
      SUBROUTINE OTAB4A
C                                                          810625 085716001
C*****************************************************************************
C*  ATU MOD LCR - 21 MAY 80                                                  *
C*  PRINTS ITEM-SPECIFIC COSTS AND                                           *
C*  MAINTENANCE CHARACTERISTICS                                              *
C*****************************************************************************
C
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      COMMON /FULLXX/ FULLXX
      INTEGER FULLXX
      COMMON /FAIL/ FAIL(150,10)
      COMMON /FPLT/ FPLT(150)
      COMMON /FPM/ FPM(150)
      COMMON /I/ I
      COMMON /IIMCA/ IIMCA(150)
      REAL IIMCA
      COMMON /INO/ INO(150)
      COMMON /INOUN/ INOUN(150,24)
      REAL INOUN
      COMMON /ISCA/ ISCA(150)
      REAL ISCA
      COMMON /LRU/ LRU(150)
      COMMON /MTRCI/ MTRCI(150)
      REAL MTRCI
      COMMON /MXI/ MXI
      COMMON /MXNP/ MXNP
      COMMON /MXNS/ MXNS
      COMMON /NITEM/ NITEM(150,5)
      REAL NITEM
      COMMON /NP/ NP
      COMMON /NPLT/ NPLT(5,10)
      REAL NPLT
      COMMON /NS/ NS
      COMMON /OFMCA/ OFMCA(150)
      COMMON /ONMCA/ ONMCA(150)
      COMMON /PIUP/ PIUP
      COMMON /RSCA/ RSCA(150)
      COMMON /SECI/ SECI(150)
      COMMON /TDC/ TDC(150)
      COMMON /TIAC/ TIAC(150)
      COMMON /TNB/ TNB(10)
    1 FORMAT(1H1/32X,68HOUTPUT TABLE 4A: ITEM-SPECIFIC MAINTENANCE AND C
     +OSTS CHARACTERISTICS//46X,40H(COSTS IN THOUSANDS OF CONSTANT DOLLA
     +RS))
    2 FORMAT(55X,11H(CONTINUED)//)
```

```
    3 FORMAT(98X,5HTOTAL,17X,5HTOTAL/29X,3HLRU,22X,3HON-,6X,4HOFF-,22X,3
     +0HITEM     ITEM     CORR. MAINT.,1X,7HSUPPORT/2X,4HITEM,23X,5HINDI
     +-,2X,7HINITIAL,2X,5HREPL.,4X,6HEQUIP.,3X,6HEQUIP.,3X,6HMAINT.,4X,5
     +HTECH.,2X,7HINVENT.,2X,7HSUPPORT,2X,9HCOST/FAIL,4X,6HCOST +/2X,5HI
     +NDEX,2X,9HITEM NAME,11X,5HCATOR,2X,6HSPARES,3X,6HSPARES,3X,6HMAINT
     +.,3X,6HMAINT.,3X,8HTRAINING,2X,6HORDERS,1X,5HMGMT.,4X,4HCOST,5X,11
     +H(RSCA+ONMCA,2X,4HSECI/2X,3H(I),24X,5H(LRU),2X,6H(ISCA),3X,6H(RSCA
     +),3X,7H(ONMCA),2X,7H(OFMCA),2X,7H(MTRCI),3X,5H(TDC),2X,7H(IIMCA),1
     +2X,7H+OFMCA),5X,6H(TIAC)/)
    4 FORMAT(1X,I3,3X,20A1,3X,I2,2X,8(F8.1,1X),3X,F6.3,3X,F8.1)
    5 FORMAT(3X,22(1H-),9X,8(8(1H-),1X),14X,8(1H-)/3X,22HCOST TOTALS OVE
     +R ITEMS,9X,8(F8.1,1X),10X,F11.1)
C
C
C
C.....ONLY PRINT THIS TABLE IF FULL OFF-LINE OUTPUT WAS REQUESTED
      IF(PRNTXX.EQ.0.OR.FULLXX.EQ.0) RETURN
C
      TEMP6=0.
      TEMP7=0.
      TEMP8=0.
      TEMP9=0.
      TEMP9A=0.
      TEMP9B=0.
      TEMP10=0.
      TEMP11=0.
      TEMP16=0.
      IPAGE=40
      IFLAG=1
      DO 270 IXXX1=1,MXI
        I=INO(IXXX1)
        IF(.NOT.(IPAGE.EQ.40)) GO TO 220
          WRITE( 7, 1)
          IPAGE=1
          IF(.NOT.(IFLAG.NE.1)) GO TO 210
            WRITE( 7, 2)
  210     CONTINUE
          WRITE( 7, 3)
  220   CONTINUE
        TEMP1=ISCA(I)/1000.
        TEMP2=RSCA(I)/1000.
        TEMP3=ONMCA(I)/1000.
        TEMP4=OFMCA(I)/1000.
        TEMP4A=MTRCI(I)/1000.
        TEMP4B=TDC(I)/1000.
        TEMP5=IIMCA(I)/1000.
        TIC=TEMP1+TEMP2+TEMP3+TEMP4+TEMP4A+TEMP4B+TEMP5
```

```
      TEM01=0.
      DO 230 NS=1,MXNS
        TEM01=TEM01+TNB(NS)*FAIL(I,NS)
  230 CONTINUE
      FPM(I)=TEM01
      FPLT(I)=12.*PIUP*FPM(I)
      CMCF=0.0
      IF(.NOT.(FPLT(I).GE.0.000001)) GO TO 240
        CMCF=(RSCA(I)+ONMCA(I)+OFMCA(I))/1000./FPLT(I)
  240 CONTINUE
      TEM03=0.
      DO 260 NS=1,MXNS
        TEM02=0.
        DO 250 NP=1,MXNP
          TEM02=TEM02+NPLT(NP,NS)*NITEM(I,NP)
  250   CONTINUE
        TEM03=TEM03+TNB(NS)*TEM02
  260 CONTINUE
      STN1=TEM03
      TIAC(I)=TIC+SEC1(I)/1000.
      WRITE( 7, 4) I,(INOUN(1,K1),K1=1,20),LRU(I),TEMP1,TEMP2,TEMP3,
     +   TEMP4,TEMP4A,TEMP4B,TEMP5,TIC,CMCF,TIAC(I)
      TEMP6=TEMP6+TEMP1
      TEMP7=TEMP7+TEMP2
      TEMP8=TEMP8+TEMP3
      TEMP9=TEMP9+TEMP4
      TEMP9A=TEMP9A+TEMP4A
      TEMP9B=TEMP9B+TEMP4B
      TEMP10=TEMP10+TEMP5
      TEMP11=TEMP11+TIC
      TEMP16=TEMP16+TIAC(I)
      IPAGE=IPAGE+1
      IFLAG=0
  270 CONTINUE
      WRITE( 7, 5) TEMP6,TEMP7,TEMP8,TEMP9,TEMP9A,TEMP9B,TEMP10,TEMP11,
     +  TEMP16
C
      RETURN
      END
```

```
      SUBROUTINE OTAB4B
C                                                          810625 085722583
C*****************************************************************************
C*  ATU MOD LCR - 21 MAY 80                                                  *
C*  PRINTS ITEM-SPECIFIC COSTS AND                                           *
C*  MAINTENANCE CHARACTERISTICS                                              *
C*****************************************************************************
C
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      COMMON /FULLXX/ FULLXX
      INTEGER FULLXX
      COMMON /BS/ BS(150)
      COMMON /DS/ DS(150)
      COMMON /FAIL/ FAIL(150,10)
      COMMON /FPLT/ FPLT(150)
      COMMON /FPM/ FPM(150)
      COMMON /I/ I
      COMMON /INO/ INO(150)
      COMMON /LUP/ LUP(150)
      REAL LUP
      COMMON /MXI/ MXI
      COMMON /MXNP/ MXNP
      COMMON /MXNS/ MXNS
      COMMON /NITEM/ NITEM(150,5)
      REAL NITEM
      COMMON /NP/ NP
      COMMON /NPLT/ NPLT(5,10)
      REAL NPLT
      COMMON /NS/ NS
      COMMON /PIUP/ PIUP
      COMMON /TNB/ TNB(10)
      COMMON /TOTPQ/ TOTPQ(150)
    1 FORMAT(1H1/37X,71HOUTPUT TABLE 4B: SYSTEM-WIDE ITEM COSTS AND MAIN
     +TENANCE CHARACTERISTICS/)
    2 FORMAT(58X,11H(CONTINUED)//)
    3 FORMAT(11X,6HSYSTEM,5X,9HTOTAL NO.,3X,9HTOTAL NO.,11X,6HNO. OF,5X,
     +11HNO. OF LIFE,17X,10HPRODUCTION/11X,6HNO. OF,5X,10HOF INITIAL,2X,
     +10HOF INITIAL,2X,6HSYSTEM,2X,4HITEM,7X,11HCYCLE FAILS,5X,7HLEARNED
     +,5X,8HCONTRACT/2X,4HITEM,5X,9HINSTALLED,2X,4HBASE,8X,5HDEPOT,7X,6H
     +NO. OF,2X,9HFAILS PER,2X,10H(NO RIP OR,6X,4HUNIT,8X,11HPROCUREMENT
     +/2X,5HINDEX,4X,5HITEMS,6X,6HSPARES,6X,6HSPARES,6X,5HITEMS,3X,6HMON
     +TH ,5X,12HFALSE PULLS),4X,4HCOST,8X,8HQUANTITY//)
    4 FORMAT(3X,I3,5X,F7.0,4X,F5.0,7X,F5.0,6X,F7.0,2X,F7.2,5X,F7.0,8X,F6
     +.0,9X,F7.0)
C
C
```

```
C
C.....ONLY PRINT THIS TABLE IF FULL OFF-LINE OUTPUT WAS REQUESTED
      IF(PRNTXX.EQ.0.OR.FULLXX.EQ.0) RETURN
C
      IPAGE=40
      IFLAG=1
      DO 260 IXXX1=1,MX1
        I=INO(IXXX1)
        IF(.NOT.(IPAGE.EQ.40)) GO TO 220
          WRITE( 7, 1)
          IPAGE=1
          IF(.NOT.(IFLAG.NE.1)) GO TO 210
            WRITE( 7, 2)
  210     CONTINUE
          WRITE( 7, 3)
  220   CONTINUE
        TEM01=0.
        DO 230 NS=1,MXNS
          TEM01=TEM01+TNB(NS)*FAIL(I,NS)
  230   CONTINUE
        FPM(I)=TEM01
        FPLT(I)=12.*PIUP*FPM(I)
        TEM03=0.
        DO 250 NS=1,MXNS
          TEM02=0.
          DO 240 NP=1,MXNP
            TEM02=TEM02+NPLT(NP,NS)*NITEM(I,NP)
  240     CONTINUE
          TEM03=TEM03+TNB(NS)*TEM02
  250   CONTINUE
        STNI=TEM03
        SNOI=STNI+BS(I)+DS(I)
        WRITE( 7, 4) I,STNI,BS(I),DS(I),SNOI,FPM(I),FPLT(I),LUP(I),
     +    TOTPQ(I)
        IPAGE=IPAGE+1
        IFLAG=0
  260 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE OTAB4C
C                                                          810625 085724799
C*****************************************************************************
C*  PRINTS ITEM-SPECIFIC COSTS AND                                           *
C*  MAINTENANCE CHARACTERISTICS                                              *
C*****************************************************************************
C
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      COMMON /FULLXX/ FULLXX
      INTEGER FULLXX
      COMMON /FPLT/ FPLT(150)
      COMMON /FPM/ FPM(150)
      COMMON /I/ I
      COMMON /INO/ INO(150)
      COMMON /LRU/ LRU(150)
      COMMON /MXI/ MXI
      COMMON /OFMCA/ OFMCA(150)
      COMMON /ONMCA/ ONMCA(150)
      COMMON /RSCA/ RSCA(150)
    1 FORMAT(1H1/32X,56HOUTPUT TABLE 4C: SYSTEM-WIDE MAINTENANCE CHARACT
     +ERISTICS///)
    2 FORMAT(23X,35HAVERAGE CORRECTIVE MAINTENANCE COST,10X,30HTOTAL NUM
     +BERS OF LRU FAILURES:/26X,20HPER FAILURE ($K) FOR//28X,4HLRUS,8X,4
     +HSRUS,27X,7HMONTHLY,3X,8HLIFETIME//26X,F6.3,6X,F6.3,27X,F7.0,2X,F9
     +.0)
C
C
C
C.....ONLY PRINT THIS TABLE IF FULL OFF-LINE OUTPUT WAS REQUESTED
      IF(PRNTXX.EQ.0.OR.FULLXX.EQ.0) RETURN
C
      WRITE( 7, 1)
      TEM01=0.
      DO 210 IXXX1=1,MXI
        I=INO(IXXX1)
        IF(.NOT.(LRU(I).EQ.1)) GO TO 210
        TEM01=TEM01+FPM(I)
  210 CONTINUE
      TEMP14=TEM01
      TEM02=0.
      DO 220 IXXX1=1,MXI
        I=INO(IXXX1)
        IF(.NOT.(LRU(I).EQ.1)) GO TO 220
        TEM02=TEM02+FPLT(I)
  220 CONTINUE
      TEMP15=TEM02
```

```
      TEM03=0.
      DO 230 IXXX1=1,MXI
        I=INO(IXXX1)
        IF(.NOT.(LRU(I).EQ.1)) GO TO 230
        TEM03=TEM03+RSCA(I)+ONMCA(I)+OFMCA(I)
  230 CONTINUE
      TEMP12=TEM03
      TEM04=0.
      DO 240 IXXX1=1,MXI
        I=INO(IXXX1)
        IF(.NOT.(LRU(I).EQ.1)) GO TO 240
        TEM04=TEM04+FPLT(I)
  240 CONTINUE
      TEMP12=TEMP12/(1000.*TEM04)
      TEMP13=0
      TEM05=0.
      DO 250 IXXX1=1,MXI
        I=INO(IXXX1)
        IF(.NOT.(LRU(I).EQ.0)) GO TO 250
        TEM05=TEM05+FPLT(I)
  250 CONTINUE
      TEMP11=TEM05
      IF(.NOT.(TEMP11.GE.0.000001)) GO TO 270
        TEM06=0.
        DO 260 IXXX1=1,MXI
          I=INO(IXXX1)
          IF(.NOT.(LRU(I).EQ.0)) GO TO 260
          TEM06=TEM06+RSCA(I)+ONMCA(I)+OFMCA(I)
  260   CONTINUE
        TEMP13=TEM06/(1000*TEMP11)
  270 CONTINUE
      WRITE( 7, 2) TEMP12,TEMP13,TEMP14,TEMP15
C
      RETURN
      END
```

```
      SUBROUTINE OTAB5
C                                                                  810625 085726644
C*****************************************************************************
C*  ATU MOD LCR - 21 MAY 80                                                  *
C*  PRINTS SUPPORT EQUIPMENT REQUIREMENTS AND COSTS                          *
C*****************************************************************************
C
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      COMMON /FULLXX/ FULLXX
      INTEGER FULLXX
      COMMON /BPLAT/ BPLAT(10)
      INTEGER BPLAT
      COMMON /BTYPE/ BTYPE(10)
      INTEGER BTYPE
      COMMON /CSE/ CSE(120)
      COMMON /L/ L
      COMMON /MSE/ MSE(120)
      REAL MSE
      COMMON /MXL/ MXL
      COMMON /MXNS/ MXNS
      COMMON /NS/ NS
      COMMON /NSEB/ NSEB(120,10)
      REAL NSEB
      COMMON /NSED/ NSED(120)
      REAL NSED
      COMMON /PIUP/ PIUP
      COMMON /SEDV/ SEDV(120)
      COMMON /SEINO/ SEINO(120)
      INTEGER SEINO
      COMMON /SENOUN/ SENOUN(120,20)
      COMMON /SETDC/ SETDC(120)
      COMMON /TNB/ TNB(10)
      COMMON /TUCTDC/ TUCTDC
    1 FORMAT(1H1,27X,56HOUTPUT TABLE 5: SUPPORT EQUIPMENT REQUIREMENTS A
     +ND COSTS/43X,18H(COSTS IN DOLLARS)///30X,93H* SUPPORT EQUIPMENT UN
     +ITS REQUIRED AT: *  SYSTEM   * UNIT  * TECH. * SE    * SYSTEM
     +    */30X,1H*,36(1H-),54H*  TOTAL    * LIFE- * ORDER * DEVMT * LIF
     +E-          */3X,2HSE,25X,93H* INDEP CIMF  *  AIR  GROUND *  THE
     +  *  REQUIRED * TIME  * COST  * COST  * TIME           */2X,5HINDE
     +X,2X,20HSUPPORT EQUIP. NAME ,1X,93H* BASES BASES * BASES BASES  *
     +DEPOT   *  UNITS    * COST  *       *       * COST ($K)      */3X,
     +3H(L),24X,93H*              *              *          *  (1)      *
     +(2)   * (3)   * (4)   * (1)*(2)+(3)+(4)*///)
    2 FORMAT(2X,I3,3X,20A1,2X,F6.0,1X,F6.0,1X,F6.0,1X,F6.0,2X,F6.1,5X,F7
     +.0,2X,F8.0,1X,F8.0,1X,F8.0,4X,F10.0)
    3 FORMAT(///95X,11HSUBTOTAL = ,4X,F10.0)
```

```
    4 FORMAT(  34X,32HUCT SOFTWARE DEVELOPMENT COST = ,4X,F10.0)
    5 FORMAT(109X,14(1H-))
    6 FORMAT(75X,31HTOTAL SUPPORT EQUIPMENT COST = ,1X,F13.0)
C
C
C
C.....ONLY PRINT THIS TABLE IF FULL OFF-LINE OUTPUT WAS REQUESTED
      IF(PRNTXX.EQ.0.OR.FULLXX.EQ.0) RETURN
C
      T10=0.
      WRITE( 7, 1)
      DO 260 IXXX1=1,MXL
        L=SEIN(IXXX1)
        TEM01=0.
        DO 210 NS=1,MXNS
          IF(.NOT.(ETYPE(NS).EQ.1)) GO TO 210
          TEM01=TEM01+TNB(NS)*NSEB(L,NS)
  210   CONTINUE
        T1=TEM01
        TEM02=0
        DO 220 NS=1,MXNS
          IF(.NOT.(ETYPE(NS).EQ.2)) GO TO 220
          TEM02=TEM02+TNB(NS)*NSEB(L,NS)
  220   CONTINUE
        T2=TEM02
        TEM03=0.
        DO 230 NS=1,MXNS
          IF(.NOT.(BPLAT(NS).EQ.1)) GO TO 230
          TEM03=TEM03+TNB(NS)*NSEB(L,NS)
  230   CONTINUE
        T3=TEM03
        TEM04=0.
        DO 240 NS=1,MXNS
          IF(.NOT.(BPLAT(NS).EQ.2)) GO TO 240
          TEM04=TEM04+TNB(NS)*NSEB(L,NS)
  240   CONTINUE
        T4=TEM04
        TEM05=0.
        DO 250 NS=1,MXNS
          IF(.NOT.(BPLAT(NS).EQ.3)) GO TO 250
          TEM05=TEM05+TNB(NS)*NSEB(L,NS)
  250   CONTINUE
        T5=TEM05
        T6=NSED(L)
        T7=T1+T2+T6
        T8=CSE(L)*(1.+PIUP*MSE(L))
        T8A=SETDC(L)
```

```
        T8B=SEDV(L)
        T9=(T7*T8+T8A+T8B)/1000.
        T10=T10+T9
        T11=T10+TUCTDC/1000.
        WRITE( 7, 2) L,(SENOUN(L,K1),K1=1,20),T1,T2,T3,T4,T6,T7,T8,T8A,
     +    T8B,T9
  260 CONTINUE
      WRITE( 7, 3) T10
      T12=TUCTDC/1000.
      WRITE( 7, 4) T12
      WRITE( 7, 5)
      WRITE( 7, 6) T11
C
      RETURN
      END
```

```
      SUBROUTINE TAB6
C                                                              810625 085729454
C*****************************************************************************
C*  ATA 347X/158 - 3 TAB 80                                                  *
C*  PRINTS PLATFORM/TERMINAL FAILURE RATE                                    *
C*****************************************************************************
C
      COMMON /PANTXX/ PANTXX
      INTEGER PANTXX
      COMMON /FLLXX/ FLLXX
      INTEGER FLLXX
      COMMON /MTP/ MTP(3,3)
      COMMON /MM/ MM
      COMMON /NN/ NN(250)
      COMMON /REA/ REA(4)
      REAL REA
      COMMON /LL/ LL(5)
      COMMON /SS/ SS(250)
      COMMON /RS/ RS(1,50)
      COMMON /MTBMI/ MTBMI(150,4)
      REAL MTBMI
      COMMON /MXI/ MXI
      COMMON /MXNP/ MXNP
      COMMON /MXNS/ MXNS
      COMMON /NTTPM/ NTTPM(150,5)
      REAL NTTPM
      COMMON /NP/ NP
      COMMON /NPLT/ NPLT(5,10)
      REAL NPLT
      COMMON /NS/ NS
      COMMON /NTRMP/ NTRMP(5)
      REAL NTRMP
      COMMON /PNOEN/ PNOEN(5,12)
      COMMON /TERMC/ TERMC(5)
      COMMON /TFAC/ TFAC(5)
      COMMON /TNB/ TNB(10)
      COMMON /XFK/ XFK
    1 FORMAT('1H1',12X,51H0UTPUT TABLE 6: PLATFORM/TERMINAL FAILURE RATE D
     +ATA ',24X,55HSYSTEM  PME     FAILS*/  FAILS*/  FAILS*/
     +FAILS*/      /88H  PLAT-                  NO. OF  TERM.   MONTH    M
     +ONTH    MIL.HRS  MIL.HRS    PROD. COST/86H  FORM
     +PLAT-    PER      PER       PER       PER       PER       PER PLAT  /8
     +7H  INDEX  PLATFORM NAME  FORMS   PLAT    PLAT     TERM.    PLAT
     +   TERMINAL   TYPE ($K) /38H  (NP)                              (NTRMP)
     +         /)
    2 FORMAT(3X,I2,4X,12A1,3X,F6.0,2X,F5.2,3X,F6.3,2X,F6.3,2X,F7.0,2X,F7
     +.1,3X,F8.0)
```

```
    3 FORMAT(////4X,65H* THESE FAILURES INCLUDE EVERY EVENT REQUIRING MA
     +INTENANCE ACTION/6X,65H(INCLUDING REPAIR-IN-PLACE).  THEY DO NOT I
     +NCLUDE FALSE PULLS.    )
C
C
C
C.....ONLY PRINT THIS TABLE IF FULL OFF-LINE OUTPUT WAS REQUESTED
      IF(PRNTXX.EQ.0.OR.FULLXX.EQ.0) RETURN
C
      WRITE( 7, 1)
      DO 250 NP=1,MXNP
        TEM01=0.
        DO 210 NS=1,MXNS
          TEM01=TEM01+TNB(NS)*NPLT(NP,NS)
  210   CONTINUE
        TPLT=TEM01
        PFPM=0.
        TEM02=0.
        DO 220 IXXX2=1,MXI
          I=INO(IXXX2)
          IF(.NOT.(LRU(I).EQ.1.AND.NITEM(I,NP).GT..000001)) GO TO 220
          TEM02=TEM02+NITEM(I,NP)/MTBMI(I,LE(NP))
  220   CONTINUE
        TEM03=0.
        DO 230 NS=1,MXNS
          TEM03=TEM03+NPLT(NP,NS)*TNB(NS)*APFH(NP,LO(NS))
  230   CONTINUE
        PFPM=TEM02*TEM03*TFAC(NP)*KFAC(LE(NP))*XFR/TPLT
        TFPM=PFPM/NTRMP(NP)
        PFPMH=0.
        TEM04=0.
        DO 240 IXXX2=1,MXI
          I=INO(IXXX2)
          IF(.NOT.(LRU(I).EQ.1.AND.NITEM(I,NP).GT..000001)) GO TO 240
          TEM04=TEM04+NITEM(I,NP)/MTBMI(I,LE(NP))
  240   CONTINUE
        PFPMH=TEM04*TFAC(NP)*KFAC(LE(NP))*1000000.*XFR
        TFPMH=PFPMH/NTRMP(NP)
        T1=TERMC(NP)/1000.
        WRITE( 7, 2) NP,(PNOUN(NP,K1),K1=1,12),TPLT,NTRMP(NP),PFPM,TFPM,
     +    PFPMH,TFPMH,T1
  250 CONTINUE
      WRITE( 7, 3)
C
      RETURN
      END
```

```
      SUBROUTINE OTAB7
C                                                          810625 085732060
C*****************************************************************************
C*  BASELINE CHANGES                                                         *
C*  PRINTS MANPOWER REQUIREMENTS                                             *
C*****************************************************************************
C
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      COMMON /FULLXX/ FULLXX
      INTEGER FULLXX
      COMMON /ABMHYD/ ABMHYD(10)
      COMMON /ABMHYM/ ABMHYM(10)
      COMMON /ABMP/ ABMP(10)
      COMMON /ADMP/ ADMP
      COMMON /BCMH/ BCMH(150)
      COMMON /BMF/ BMF
      COMMON /BMH/ BMH(150)
      COMMON /COND/ COND(150)
      COMMON /DMF/ DMF
      COMMON /DMH/ DMH(150)
      COMMON /FAIL/ FAIL(150,10)
      COMMON /FPR/ FPR(150)
      COMMON /HPD1/ HPD1
      INTEGER HPD1
      COMMON /HPD2/ HPD2
      INTEGER HPD2
      COMMON /I/ I
      COMMON /INO/ INO(150)
      COMMON /LRU/ LRU(150)
      COMMON /MRF/ MRF
      REAL MRF
      COMMON /MRO/ MRO
      REAL MRO
      COMMON /MXI/ MXI
      COMMON /MXNS/ MXNS
      COMMON /NHI/ NHI(150)
      COMMON /NRTS/ NRTS(150)
      REAL NRTS
      COMMON /NS/ NS
      COMMON /QTYP1/ QTYP1
      INTEGER QTYP1
      COMMON /QTYP2B/ QTYP2B
      INTEGER QTYP2B
      COMMON /QTYP2D/ QTYP2D
      INTEGER QTYP2D
      COMMON /RIP/ RIP(150)
```

```
      COMMON /RTS/ RTS(150)
      COMMON /SAMHY/ SAMHY
      COMMON /SAMP/ SAMP
      COMMON /SR/ SR
      COMMON /TABMHY/ TABMHY(10)
      COMMON /TABMP/ TABMP(10)
      COMMON /TIME1/ TIME1(150)
      INTEGER TIME1
      COMMON /TMPYT1/ TMPYT1
      COMMON /TMPYT2/ TMPYT2
      COMMON /TNB/ TNB(10)
      COMMON /TORB/ TORB
      COMMON /TORD/ TORD
      COMMON /TR/ TR
      COMMON /T2BA/ T2BA
      COMMON /T2DA/ T2DA
      COMMON /XFPR/ XFPR
      REAL NHNRT
      REAL NHRT
    1 FORMAT(1H1,22X,38HOUTPUT TABLE 7:  MANPOWER REQUIREMENTS///2X,4HBA
     +SE,5X,12HMANHOURS PER,10X,14HTOTAL MANYEARS,6X,14HTOTAL MANHOURS,6
     +X,14HTOTAL MANYEARS/2X,4HTYPE,5X,13HYEAR PER BASE,7X,17HPER YEAR P
     +ER BASE,3X,18HPER YEAR/BASE TYPE,2X,18HPER YEAR/BASE TYPE/2X,4H(NS
     +)/9X,20HMAINT.    MGMT. DATA//)
    2 FORMAT(3X,I2,4X,F6.0,4X,F6.0,11X,F4.1,15X,F8.0,13X,F6.1)
    3 FORMAT(/2X,4HBASE/2X,5HTOTAL,4X,3H- -,8X,3H- -,12X,3H- -,15X,F8.0,
     +13X,F6.1)
    4 FORMAT(/2X,5HDEPOT/2X,5HTOTAL,4X,3H- -,8X,3H- -,12X,3H- -,15X,F8.0
     +,13X,F6.1/)
    5 FORMAT(2X,5HTOTAL,48X,F8.0,13X,F6.1 ///)
    6 FORMAT(31X,23HTOTAL MANYEARS PER YEAR/35X,23H    IN TRAINING
     +  //9X,20HFIRST YEAR          ,8X,F6.1//9X,20HEACH SUBSEQUENT YEAR
     +,8X,F6.1)
C
C
C
C.....ONLY PRINT THIS TABLE IF FULL OFF-LINE OUTPUT WAS REQUESTED
      IF(PRNTXX.EQ.0.OR.FULLXX.EQ.0) RETURN
C
      TEMO1=0.
      DO 210 IXXX1=1,MXI
        I=INO(IXXX1)
        TEMO1=TEMO1+TIME1(I)
  210 CONTINUE
      T1=TEMO1
      ABMHY=0.
      ABMPY=0.
```

```
      ADMHY=0.
      WRITE( 7, 1)
      DO 250 NS=1,MXNS
        SUM1=0.
        SUM2=0.
        SUM3=0.
        DO 240 IXXX2=1,MXI
          I=INO(IXXX2)
          NHRT=0.
          NHNRT=0.
          IF(.NOT.(LRU(I).EQ.0)) GO TO 220
            NHRT=RTS(NHI(I))
            NHNRT=NRTS(NHI(I))
220       CONTINUE
          ABMHFM=(FLOAT(LRU(I))+NHRT)*(((1.+FPR(I)*XFPR)*BCMH(I)+RTS(I)*
     +      BMH(I))*BMF)
          ADMHF=((FLOAT(LRU(I))+NHRT)*NRTS(I)+NHNRT*(1.-COND(I)))*DMH(I)
     +      *DMF
          SUM1=SUM1+ABMHFM*FAIL(I,NS)
          SUM2=SUM2+ADMHF*FAIL(I,NS)*TNB(NS)
          T2=1.0
          IF(.NOT.(RIP(I).LT.0.999)) GO TO 230
            T2=RIP(I)/(1.0-RIP(I))
230       CONTINUE
          SUM3=SUM3+(T2*MRO+MRF+SR+TR)*FAIL(I,NS)
240     CONTINUE
        ABMHYM(NS)=12.*SUM1
        ABMHYD(NS)=12.*SUM3
        ABMP(NS)=(ABMHYM(NS)+ABMHYD(NS))/1728.
        TABMHY(NS)=(ABMHYM(NS)+ABMHYD(NS))*TNB(NS)
        TABMP(NS)=TABMHY(NS)/1728.
        ABMPY=ABMPY+TABMP(NS)
        ABMHY=ABMHY+TABMHY(NS)
        ADMHY=ADMHY+12.*SUM2
        WRITE( 7, 2) NS,ABMHYM(NS),ABMHYD(NS),ABMP(NS),TABMHY(NS),
     +    TABMP(NS)
250   CONTINUE
      ADMP=ADMHY/1728.
      SAMHY=ABMHY+ADMHY
      SAMP=ABMPY+ADMP
      TMPYT1=FLOAT(QTYP2D)*AINT(T2DA/FLOAT(HPD2)+.5)/216.+FLOAT(QTYP2B)*
     +  AINT(T2BA/FLOAT(HPD2)+.5)/216.
      IF(.NOT.(HPD1.GT.0.0001)) GO TO 260
        TMPYT1=TMPYT1+FLOAT(QTYP1)*AINT(T1/FLOAT(HPD1)+.5)/216.
260   CONTINUE
      TMPYT2=FLOAT(QTYP2D)*TORD*AINT(T2DA/FLOAT(HPD2)+.5)/216.+
     +  FLOAT(QTYP2B)*TOKB*AINT(T2BA/FLOAT(HPD2)+.5)/216.
```

```
      WRITE( 7, 3) ABMHY,ABMPY
      WRITE( 7, 4) ADMHY,ADMP
      WRITE( 7, 5) SAMHY,SAMP
      WRITE( 7, 6) TMPYT1,TMPYT2
C
      RETURN
      END
```

```
      SUBROUTINE RLAPRT
C                                                                  810625 085737649
C*****************************************************************************
C*  PRINTS TIAC TO A FILE OF LATER USE IN RLA                                *
C*****************************************************************************
C
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      COMMON /FULLXX/ FULLXX
      INTEGER FULLXX
      COMMON /DUM/ DUM
      INTEGER DUM
      COMMON /I/ I
      COMMON /INO/ INO(150)
      COMMON /MXI/ MXI
      COMMON /TIAC/ TIAC(150)
      INTEGER FINISH
      INTEGER START
    1 FORMAT(I3)
    2 FORMAT(6(I3,1X,F8.1,1X))
    3 FORMAT(1H$)
C
C
C
C
      WRITE(23, 1) MXI
      DO 220 DUM=1,MXI,6
        START=DUM
        FINISH=DUM+5
        IF(.NOT.(FINISH.GT.MXI)) GO TO 210
          FINISH=MXI
  210   CONTINUE
        WRITE(23, 2) (INO(I),TIAC(INO(I)),I=START,FINISH)
  220 CONTINUE
      WRITE(23, 3)
C
      RETURN
      END
```

```
      SUBROUTINE OSENS
C                                                          810625 085739747
C*****************************************************************************
C*  PRINTS THE RESULTS OF THE SENSITIVITY ANALYSIS ON THE                    *
C*  OFF-LINE PRINTER AND/OR AT THE TERMINAL.                                 *
C*  IF PRNTXX=1 OR 2, OUTPUT GOES TO THE PRINTER.                            *
C*  IF PRNTXX=0 OR 2, OUTPUT GOES TO THE TERMINAL.                           *
C*****************************************************************************
C
      DIMENSION XXTEM1(  150),XXTEM2(  150)
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      COMMON /COND/ COND(150)
      COMMON /CPIUP/ CPIUP
      COMMON /FINC/ FINC
      COMMON /FPR/ FPR(150)
      COMMON /I/ I
      COMMON /IDCOND/ IDCOND(150)
      COMMON /IDFPR/ IDFPR(150)
      COMMON /IDFR/ IDFR(150)
      COMMON /IDNRTS/ IDNRTS(150)
      COMMON /IDRM/ IDRM(150)
      COMMON /IDRTS/ IDRTS(150)
      COMMON /IDSRU/ IDSRU(150)
      COMMON /IDUP/ IDUP(150)
      COMMON /INO/ INO(150)
      COMMON /LDCOND/ LDCOND
      COMMON /LDERV/ LDERV
      COMMON /LDFPR/ LDFPR
      COMMON /LDFR/ LDFR
      COMMON /LDNRTS/ LDNRTS
      COMMON /LDRM/ LDRM
      COMMON /LDRTS/ LDRTS
      COMMON /LDSRU/ LDSRU
      COMMON /LDUP/ LDUP
      COMMON /LRU/ LRU(150)
      COMMON /NRTS/ NRTS(150)
      REAL NRTS
      COMMON /RM/ RM(150)
      COMMON /RTS/ RTS(150)
      COMMON /TDCOND/ TDCOND(150)
      COMMON /TDFPR/ TDFPR(150)
      COMMON /TDFR/ TDFR(150)
      COMMON /TDMF/ TDMF
      COMMON /TDNRTS/ TDNRTS(150)
      COMMON /TDPIUP/ TDPIUP
      COMMON /TDRM/ TDRM(150)
```

```
      COMMON /TDRTS/ TDRTS(150)
      COMMON /TDSRU/ TDSRU(150)
      COMMON /TDUP/ TDUP(150)
      COMMON /TDXFPR/ TDXFPR
      COMMON /TDXFR/ TDXFR
      COMMON /TDXMIL/ TDXMIL
      COMMON /TDXRM/ TDXRM
      COMMON /TDXUC/ TDXUC
      COMMON /TFR/ TFR(150)
      COMMON /UP/ UP(150)
C
    1 FORMAT(1H1/25X,30HLCC SENSITIVITY ANALYSIS TABLE/)
    2 FORMAT(30H   CHANGE IN LCC ($M)          ,12F7.3)
    3 FORMAT(1X,41H CHANGE IN LCC ($M) DUE TO AN INCREASE OF,F5.1,25H %
     +IN:                 )
    4 FORMAT(46H   GLOBAL UNIT COST (XUC FACTOR) -            ,F12.3)
    5 FORMAT(46H   GLOBAL FAILURE RATE (XFR FACTOR) -         ,F12.3)
    6 FORMAT(46H   GLOBAL FALSE PULL RATE (XFPR FACTOR) -     ,F12.3)
    7 FORMAT(46H   MAINTENANCE REPAIR TIMES (BMF/DMF FACTOR) -,F12.3)
    8 FORMAT(46H   REPAIR MATERIALS COST (XRM FACTOR) -       ,F12.3)
    9 FORMAT(46H   MOD/I LABOR HOURS (XMIL FACTOR) -          ,F12.3)
   10 FORMAT(1X/41H CHANGE IN LCC ($M) DUE TO AN INCREASE OF,F5.1,25H YE
     +ARS IN:                 )
   11 FORMAT(46H   SYSTEM LIFETIME (PIUP FACTOR) -            ,F12.3)
   12 FORMAT(1X/71H ITEM FAILURE RATE (ORDERED BY SIGNIFICANCE)
     +                    )
   13 FORMAT(/30H   ITEM INDEX                  ,3X,12(I4,3X))
   14 FORMAT(30H   CHANGE IN FR (PPM)          ,12F7.0)
   15 FORMAT(1X/71H ITEM UNIT COST (ORDERED BY SIGNIFICANCE)
     +                    )
   16 FORMAT(/30H   ITEM INDEX                  ,3X,12(I4,3X))
   17 FORMAT(30H   CHANGE IN UP                ,12F7.0)
   18 FORMAT(1X/71H ITEM FALSE PULL RATE (ORDERED BY SIGNIFICANCE)
     +                    )
   19 FORMAT(/30H   ITEM INDEX                  ,1X,12(I4,3X))
   20 FORMAT(30H   CHANGE IN FPR               ,12F7.3)
   21 FORMAT(1X/71H ITEM REPAIR MATERIALS COST (ORDERED BY SIGNIFICANCE)
     +                    )
   22 FORMAT(/30H   ITEM INDEX                  ,3X,12(I4,3X))
   23 FORMAT(30H   CHANGE IN RM (COST)         ,12F7.0)
   24 FORMAT(1X/71H ITEM INTERMEDIATE REPAIR FRACTION (ORDERED BY SIGNIF
     +ICANCE)             )
   25 FORMAT(/30H   ITEM INDEX                  ,1X,12(I4,3X))
   26 FORMAT(30H   CHANGE IN RTS               ,12F7.2)
   27 FORMAT(1X/71H ITEM DEPOT REPAIR FRACTION (ORDERED BY SIGNIFICANCE)
     +                    )
   28 FORMAT(/30H   ITEM INDEX                  ,1X,12(I4,3X))
```

```
   29 FORMAT(30H   CHANGE IN NRTS              ,12F7.2)
   30 FORMAT(1X/71H ITEM CONDEMNATION RATE (ORDERED BY SIGNIFICANCE)
     +                  )
   31 FORMAT(/30H   ITEM INDEX                  ,1X,12(I4,3X))
   32 FORMAT(30H   CHANGE IN COND              ,12F7.2)
   33 FORMAT(1X/71H LCC SENSITIVITY ON WHICH SRUS SHOULD BE LRU
     +                  )
   34 FORMAT(/30H   ITEM INDEX                  ,3X,12(I4,3X))
   35 FORMAT(30H   CHANGE IN SRU               ,12F7.0)
C
C
C
      IF(PRNTXX.NE.1)WRITE(6,1)
      IF(PRNTXX.NE.0)WRITE(7,1)
      TEMXXX=FINC*100.
      IF(PRNTXX.NE.1)WRITE(6, 3) TEMXXX
      IF(PRNTXX.NE.0)WRITE(7, 3) TEMXXX
      IF(PRNTXX.NE.1)WRITE(6, 4) TDXUC
      IF(PRNTXX.NE.0)WRITE(7, 4) TDXUC
      IF(PRNTXX.NE.1)WRITE(6, 5) TDXFR
      IF(PRNTXX.NE.0)WRITE(7, 5) TDXFR
      IF(PRNTXX.NE.1)WRITE(6, 6) TDXFPR
      IF(PRNTXX.NE.0)WRITE(7, 6) TDXFPR
      IF(PRNTXX.NE.1)WRITE(6, 7) TDMF
      IF(PRNTXX.NE.0)WRITE(7, 7) TDMF
      IF(PRNTXX.NE.1)WRITE(6, 8) TDXRM
      IF(PRNTXX.NE.0)WRITE(7, 8) TDXRM
      IF(PRNTXX.NE.1)WRITE(6, 9) TDXMIL
      IF(PRNTXX.NE.0)WRITE(7, 9) TDXMIL
      TEMXXX=CPIUP
      IF(PRNTXX.NE.1)WRITE(6,10) TEMXXX
      IF(PRNTXX.NE.0)WRITE(7,10) TEMXXX
      IF(PRNTXX.NE.1)WRITE(6,11) TDPIUP
      IF(PRNTXX.NE.0)WRITE(7,11) TDPIUP
C
C*****************************************************************************
C*  SECTION  1:  ITEM FAILURE RATE (ORDERED BY SIGNIFICANCE)                 *
C*****************************************************************************
C
      IF(LDFR  .EQ.0.AND.LDERV .EQ.0) GO TO 305
      IXXX=MAX0(LDERV ,LDFR  )
      DO 301 JXXX=1,IXXX
        XXTEM1(JXXX)=FINC  *TFR(IDFR  (JXXX))
        XXTEM2(JXXX)=TDFR  (IDFR  (JXXX))
  301 CONTINUE
C
C.....PRINT OUT DERIVATIVES AT TERMINAL SIX AT A TIME.
```

```
      IF(LDFR  .EQ.0.OR.PRNTXX.EQ.1) GO TO 303
      WRITE(6, 12)
      DO 302 JXXX=1,LDFR  ,6
        MMHI=MIN0(LDFR  ,JXXX+5)
        WRITE(6, 13) (IDFR  (KXXX),KXXX=JXXX,MMHI)
        WRITE(6, 14) (XXTEM1(KXXX),KXXX=JXXX,MMHI)
        WRITE(6,2) (XXTEM2(KXXX),KXXX=JXXX,MMHI)
  302 CONTINUE
C
C.....PRINT OUT DERIVATIVES ON OFF-LINE PRINTER 12 AT A TIME.
  303 IF(PRNTXX.EQ.0) GO TO 305
      WRITE(7, 12)
      DO 304 JXXX=1,IXXX,12
        MMHI=MIN0(IXXX,JXXX+11)
        WRITE(7, 13) (IDFR  (KXXX),KXXX=JXXX,MMHI)
        WRITE(7, 14) (XXTEM1(KXXX),KXXX=JXXX,MMHI)
        WRITE(7,2) (XXTEM2(KXXX),KXXX=JXXX,MMHI)
  304 CONTINUE
  305 CONTINUE
C
C*****************************************************************************************
C*  SECTION  2:  ITEM UNIT COST (ORDERED BY SIGNIFICANCE)                              *
C*****************************************************************************************
C
      IF(LDUP  .EQ.0.AND.LDERV .EQ.0) GO TO 310
      IXXX=MAX0(LDERV ,LDUP  )
      DO 306 JXXX=1,IXXX
        XXTEM1(JXXX)=FINC  *UP(IDUP  (JXXX))
        XXTEM2(JXXX)=TDUP  (IDUP  (JXXX))
  306 CONTINUE
C
C.....PRINT OUT DERIVATIVES AT TERMINAL SIX AT A TIME.
      IF(LDUP  .EQ.0.OR.PRNTXX.EQ.1) GO TO 308
      WRITE(6, 15)
      DO 307 JXXX=1,LDUP  ,6
        MMHI=MIN0(LDUP  ,JXXX+5)
        WRITE(6, 16) (IDUP  (KXXX),KXXX=JXXX,MMHI)
        WRITE(6, 17) (XXTEM1(KXXX),KXXX=JXXX,MMHI)
        WRITE(6,2) (XXTEM2(KXXX),KXXX=JXXX,MMHI)
  307 CONTINUE
C
C.....PRINT OUT DERIVATIVES ON OFF-LINE PRINTER 12 AT A TIME.
  308 IF(PRNTXX.EQ.0) GO TO 310
      WRITE(7, 15)
      DO 309 JXXX=1,IXXX,12
        MMHI=MIN0(IXXX,JXXX+11)
        WRITE(7, 16) (IDUP  (KXXX),KXXX=JXXX,MMHI)
```

```
        WRITE(7, 17) (XXTEM1(KXXX),KXXX=JXXX,MMHI)
        WRITE(7,2) (XXTEM2(KXXX),KXXX=JXXX,MMHI)
  309 CONTINUE
  310 CONTINUE
C
C*****************************************************************************
C*  SECTION  3:  ITEM FALSE PULL RATE (ORDERED BY SIGNIFICANCE)          *
C*****************************************************************************
C
      IF(LDFPR .EQ.0.AND.LDERV .EQ.0) GO TO 315
      IXXX=MAX0(LDERV ,LDFPR )
      DO 311 JXXX=1,IXXX
        XXTEM1(JXXX)=FINC  *FPR(IDFPR (JXXX))
        XXTEM2(JXXX)=TDFPR (IDFPR (JXXX))
  311 CONTINUE
C
C.....PRINT OUT DERIVATIVES AT TERMINAL SIX AT A TIME.
      IF(LDFPR .EQ.0.OR.PRNTXX.EQ.1) GO TO 313
      WRITE(6, 18)
      DO 312 JXXX=1,LDFPR ,6
        MMHI=MIN0(LDFPR ,JXXX+5)
        WRITE(6, 19) (IDFPR (KXXX),KXXX=JXXX,MMHI)
        WRITE(6, 20) (XXTEM1(KXXX),KXXX=JXXX,MMHI)
        WRITE(6,2) (XXTEM2(KXXX),KXXX=JXXX,MMHI)
  312 CONTINUE
C
C.....PRINT OUT DERIVATIVES ON OFF-LINE PRINTER 12 AT A TIME.
  313 IF(PRNTXX.EQ.0) GO TO 315
      WRITE(7, 18)
      DO 314 JXXX=1,IXXX,12
        MMHI=MIN0(IXXX,JXXX+11)
        WRITE(7, 19) (IDFPR (KXXX),KXXX=JXXX,MMHI)
        WRITE(7, 20) (XXTEM1(KXXX),KXXX=JXXX,MMHI)
        WRITE(7,2) (XXTEM2(KXXX),KXXX=JXXX,MMHI)
  314 CONTINUE
  315 CONTINUE
C
C*****************************************************************************
C*  SECTION  4:  ITEM REPAIR MATERIALS COST (ORDERED BY SIGNIFICANC     *
C*****************************************************************************
C
      IF(LDRM  .EQ.0.AND.LDERV .EQ.0) GO TO 320
      IXXX=MAX0(LDERV ,LDRM  )
      DO 316 JXXX=1,IXXX
        XXTEM1(JXXX)=FINC  *RM(IDRM  (JXXX))*UP(IDRM  (JXXX))
        XXTEM2(JXXX)=TDRM  (IDRM  (JXXX))
  316 CONTINUE
```

```
C
C.....PRINT OUT DERIVATIVES AT TERMINAL SIX AT A TIME.
      IF(LDRM  .EQ..0.AND.KNTXX.EQ.1) GO TO 318
      WRITE(6, 21)
      DO 317 JXXX=1,LDRM  ,6
        MMHI=MIN0(LDRM  ,JXXX+5)
        WRITE(6, 22) (IDRM  (KXXX),KXXX=JXXX,MMHI)
        WRITE(6, 23) (XXTEM1(KXXX),KXXX=JXXX,MMHI)
        WRITE(6,24) (XXTEM2(KXXX),KXXX=JXXX,MMHI)
  317 CONTINUE
C
C.....PRINT OUT DERIVATIVES ON OFF-LINE PRINTER 12 AT A TIME.
  318 IF(PRNTXX.EQ.0) GO TO 320
      WRITE(7, 21)
      DO 319 JXXX=1,LXXX,6
        MMHI=MIN0(LXXX,JXXX+5)
        WRITE(7, 22) (IDRM  (KXXX),KXXX=JXXX,MMHI)
        WRITE(7, 23) (XXTEM1(KXXX),KXXX=JXXX,MMHI)
        WRITE(7,24) (XXTEM2(KXXX),KXXX=JXXX,MMHI)
  319 CONTINUE
  320 CONTINUE
C
C*********************************************************************************************
C*  SECTION  5:  ITEM INTERMEDIATE REPAIR FRACTION (ORDERED BY SIGN    *
C*********************************************************************************************
C
      IF(LDRTS .EQ.0.AND.LDERV .EQ.0) GO TO 325
      IXXX=MAX0(LDERV ,LDRTS )
      DO 321 JXXX=1,IXXX
        XXTEM1(JXXX)=FINC  *AMIN1(FINC,NRTS(IDRTS (JXXX)))/FINC
        XXTEM2(JXXX)=IDRTS (IDRTS (JXXX))
  321 CONTINUE
C
C.....PRINT OUT DERIVATIVES AT TERMINAL SIX AT A TIME.
      IF(LDRTS .EQ.0.OR.PRNTXX.EQ.1) GO TO 323
      WRITE(6, 24)
      DO 322 JXXX=1,LDRTS ,6
        MMHI=MIN0(LDRTS ,JXXX+5)
        WRITE(6, 25) (IDRTS (KXXX),KXXX=JXXX,MMHI)
        WRITE(6, 26) (XXTEM1(KXXX),KXXX=JXXX,MMHI)
        WRITE(6,27) (XXTEM2(KXXX),KXXX=JXXX,MMHI)
  322 CONTINUE
C
C.....PRINT OUT DERIVATIVES ON OFF-LINE PRINTER 12 AT A TIME.
  323 IF(PRNTXX.EQ.0) GO TO 325
      WRITE(7, 24)
      DO 324 JXXX=1,LXXX,6
```

```
        MMHI=MIN0(IXXX,JXXX+11)
        WRITE(7, 25) (IDRTS (KXXX),KXXX=JXXX,MMHI)
        WRITE(7, 26) (XXTEM1(KXXX),KXXX=JXXX,MMHI)
        WRITE(7,2) (XXTEM2(KXXX),KXXX=JXXX,MMHI)
  324 CONTINUE
  325 CONTINUE
C
C*************************************************************************************************
C*  SECTION  6:  ITEM DEPOT REPAIR FRACTION (ORDERED BY SIGNIFICANC     *
C*************************************************************************************************
C
      IF(LDNRTS.EQ.0.AND.LDERV .EQ.0) GO TO 330
      IXXX=MAX0(LDERV ,LDNRTS)
      DO 326 JXXX=1,IXXX
        XXTEM1(JXXX)=FINC  *AMIN1(FINC,RTS(IDNRTS(JXXX)))/FINC
        XXTEM2(JXXX)=TDNRTS(IDNRTS(JXXX))
  326 CONTINUE
C
C.....PRINT OUT DERIVATIVES AT TERMINAL SIX AT A TIME.
      IF(LDNRTS.EQ.0.OR.PRNTXX.EQ.1) GO TO 328
      WRITE(6, 27)
      DO 327 JXXX=1,LDNRTS,6
        MMHI=MIN0(LDNRTS,JXXX+5)
        WRITE(6, 28) (IDNRTS(KXXX),KXXX=JXXX,MMHI)
        WRITE(6, 29) (XXTEM1(KXXX),KXXX=JXXX,MMHI)
        WRITE(6,2) (XXTEM2(KXXX),KXXX=JXXX,MMHI)
  327 CONTINUE
C
C.....PRINT OUT DERIVATIVES ON OFF-LINE PRINTER 12 AT A TIME.
  328 IF(PRNTXX.EQ.0) GO TO 330
      WRITE(7, 27)
      DO 329 JXXX=1,IXXX,12
        MMHI=MIN0(IXXX,JXXX+11)
        WRITE(7, 28) (IDNRTS(KXXX),KXXX=JXXX,MMHI)
        WRITE(7, 29) (XXTEM1(KXXX),KXXX=JXXX,MMHI)
        WRITE(7,2) (XXTEM2(KXXX),KXXX=JXXX,MMHI)
  329 CONTINUE
  330 CONTINUE
C
C*************************************************************************************************
C*  SECTION  7:  ITEM CONDEMNATION RATE (ORDERED BY SIGNIFICANCE)       *
C*************************************************************************************************
C
      IF(LDCOND.EQ.0.AND.LDERV .EQ.0) GO TO 335
      IXXX=MAX0(LDERV ,LDCOND)
      DO 331 JXXX=1,IXXX
        XXTEM1(JXXX)=FINC  *AMIN1(FINC,1.-COND(IDCOND(JXXX)))/FINC
```

```
          XXTEM2(JXXX)=TEC(NO,IDCOND(JXXX))
  331 CONTINUE
C
C.....PRINT OUT DERIVATIVES AT TERMINAL SIX AT A TIME.
      IF(LDCOND.EQ.0.OR.PRNTXX.EQ.1) GO TO 333
      WRITE(6, 40)
      DO 332 JXXX=1,LDCOND,5
        MMHI=MIN0(LDCOND,JXXX+5)
        WRITE(6, 31) (IDCOND(KXXX),KXXX=JXXX,MMHI)
        WRITE(6, 32) (XXTEM1(KXXX),KXXX=JXXX,MMHI)
        WRITE(6,2) (XXTEM2(KXXX),KXXX=JXXX,MMHI)
  332 CONTINUE
C
C.....PRINT OUT DERIVATIVES ON OFF-LINE PRINTER 12 AT A TIME.
  333 IF(PRNTXX.EQ.0) GO TO 335
      WRITE(7, 30)
      DO 334 JXXX=1,IXXX,12
        MMHI=MIN0(IXXX,JXXX+11)
        WRITE(7, 31) (IDCOND(KXXX),KXXX=JXXX,MMHI)
        WRITE(7, 32) (XXTEM1(KXXX),KXXX=JXXX,MMHI)
        WRITE(7,2) (XXTEM2(KXXX),KXXX=JXXX,MMHI)
  334 CONTINUE
  335 CONTINUE
C
C*****************************************************************************
C*  SECTION  8:  LCC SENSITIVITY ON WHICH SRUS SHOULD BE LRU                 *
C*****************************************************************************
C
      IF(LDSRU .EQ.0.AND.LDERV .EQ.0) GO TO 340
      IXXX=MAX0(LDERV ,LDSRU )
      DO 336 JXXX=1,IXXX
        XXTEM1(JXXX)=FINC *FLOAT(1-LRU(IDSRU (JXXX)))/FINC
        XXTEM2(JXXX)=TDSRU (IDSRU (JXXX))
  336 CONTINUE
C
C.....PRINT OUT DERIVATIVES AT TERMINAL SIX AT A TIME.
      IF(LDSRU .EQ.0.OR.PRNTXX.EQ.1) GO TO 338
      WRITE(6, 33)
      DO 337 JXXX=1,LDSRU ,5
        MMHI=MIN0(LDSRU ,JXXX+5)
        WRITE(6, 34) (IDSRU (KXXX),KXXX=JXXX,MMHI)
        WRITE(6, 35) (XXTEM1(KXXX),KXXX=JXXX,MMHI)
        WRITE(6,2) (XXTEM2(KXXX),KXXX=JXXX,MMHI)
  337 CONTINUE
C
C.....PRINT OUT DERIVATIVES ON OFF-LINE PRINTER 12 AT A TIME.
  338 IF(PRNTXX.EQ.0) GO TO 340
```

```
      WRITE(7, 33)
      DO 339 JXXX=1,IXXX,12
        MMHI=MINO(IXXX,JXXX+11)
        WRITE(7, 34) (IDSRU (KXXX),KXXX=JXXX,MMHI)
        WRITE(7, 35) (XXTEM1(KXXX),KXXX=JXXX,MMHI)
        WRITE(7,2) (XXTEM2(KXXX),KXXX=JXXX,MMHI)
  339 CONTINUE
  340 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE INITAL
C                                                          810625 085743830
C.....INITIALIZES VARIABLES TO DEFAULT VALUES.
C
      COMMON /NTABXX/ NTABXX
      COMMON /NERRXX/ NERRXX
      COMMON /B/ B
      INTEGER B
      COMMON /BINO/ BINO(10)
      INTEGER BINO
      COMMON /BXREF/ BXREF(1)
      INTEGER BXREF
      COMMON /DIXREF/ DIXREF(1)
      INTEGER DIXREF
      COMMON /DUMNO/ DUMNO(150)
      INTEGER DUMNO
      COMMON /DUM/ DUM
      INTEGER DUM
      COMMON /I/ I
      COMMON /IA/ IA
      COMMON /IAINO/ IAINO(4)
      COMMON /IAXREF/ IAXREF(1)
      COMMON /INO/ INO(150)
      COMMON /IRM/ IRM
      COMMON /IRMINO/ IRMINO(4)
      COMMON /IRMT/ IRMT
      COMMON /IRMTNO/ IRMTNO(4)
      COMMON /IRMTXR/ IRMTXR(1)
      COMMON /IRMXRF/ IRMXRF(1)
      COMMON /IXREF/ IXREF(150)
      COMMON /K1TEMP/ K1TEMP
      COMMON /K1TNO/ K1TNO(4)
      COMMON /K2TEMP/ K2TEMP
      COMMON /K2TNO/ K2TNO(3)
      COMMON /L/ L
      COMMON /LT/ LT
      COMMON /LTINO/ LTINO(3)
      COMMON /LTXREF/ LTXREF(1)
      COMMON /LXREF/ LXREF(120)
      COMMON /M/ M
      COMMON /MINO/ MINO(3)
      COMMON /MXI/ MXI
      COMMON /MXIRM/ MXIRM
      COMMON /MXIRMT/ MXIRMT
      COMMON /MXKT/ MXKT
      COMMON /MXKTE/ MXKTE
      COMMON /MXL/ MXL
```

```
      COMMON /MXLT/ MXLT
      COMMON /MXM/ MXM
      COMMON /MXNP/ MXNP
      COMMON /MXNS/ MXNS
      COMMON /MXREF/ MXREF(1)
      COMMON /NIA/ NIA
      COMMON /NP/ NP
      COMMON /NPINO/ NPINO(5)
      COMMON /NPXREF/ NPXREF(1)
      COMMON /NS/ NS
      COMMON /NSINO/ NSINO(10)
      COMMON /NSXREF/ NSXREF(1)
      COMMON /SEINO/ SEINO(120)
      INTEGER SEINO
      COMMON /XK1TNO/ XK1TNO(1)
      INTEGER XK1TNO
      COMMON /XK2TNO/ XK2TNO(1)
      INTEGER XK2TNO
C
      NTABXX=0
      NERRXX=0
C
      DO    10 IXXX1=1,1
        IAXREF(IXXX1)=IXXX1
        XK2TNO(IXXX1)=IXXX1
        NSXREF(IXXX1)=IXXX1
        NPXREF(IXXX1)=IXXX1
        IRMXRF(IXXX1)=IXXX1
        IRMTXR(IXXX1)=IXXX1
        DIXREF(IXXX1)=IXXX1
        LTXREF(IXXX1)=IXXX1
        BXREF(IXXX1)=IXXX1
        XK1TNO(IXXX1)=IXXX1
        MXREF(IXXX1)=IXXX1
   10 CONTINUE
C
      NIA=4
      MXKT=4
      MXL=120
      MXNP=5
      MXNS=10
      MXI=150
      MXLT=3
      MXKTE=3
      MXIRM=4
      MXM=3
      MXIRMT=4
```

```
C
      DO    30 B=1,10
        BINO(B)=B
   30 CONTINUE
C
      DO    40 IRM=1,4
        IRMINO(IRM)=IRM
   40 CONTINUE
C
      DO    50 IRMT=1,4
        IRMTNO(IRMT)=IRMT
   50 CONTINUE
C
      DO    60 IXXX1=1,150
        IXREF(IXXX1)=IXXX1
   60 CONTINUE
C
      DO    70 IA=1,4
        IAINO(IA)=IA
   70 CONTINUE
C
      DO    80 DUM=1,150
        DUINO(DUM)=DUM
   80 CONTINUE
C
      DO    90 I=1,150
        INO(I)=I
   90 CONTINUE
C
      DO   100 NS=1,10
        NSINO(NS)=NS
  100 CONTINUE
C
      DO   110 IXXX1=1,120
        LXREF(IXXX1)=IXXX1
  110 CONTINUE
C
      DO   120 NP=1,5
        NPINO(NP)=NP
  120 CONTINUE
C
      DO   130 K1TEMP=1,4
        K1TNO(K1TEMP)=K1TEMP
  130 CONTINUE
C
      DO   140 M=1,3
        MINO(M)=M
```

```
  140 CONTINUE
C
      DO   150 L=1,120
        SEINO(L)=L
  150 CONTINUE
C
      DO   160 LT=1,3
        LTINO(LT)=LT
  160 CONTINUE
C
      DO   170 K2TEMP=1,3
        K2TNO(K2TEMP)=K2TEMP
  170 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE TITLE
C                                                                  810625 085750039
C*****************************************************************************
C*  SUBROUTINE TO PRINT A TITLE PAGE FOR OFF-LINE OUTPUT.                    *
C*****************************************************************************
C
      COMMON /XTITLE/ XTITLE(30)
C
    1 FORMAT(1H1//////////////////////
     +44X,44H*************************************************/
     +44X,1H*,42X,1H*/
     +44X,44H*   AFSATCOM TERMINAL UPGRADES LCC MODEL   */
     +44X,1H*,42X,1H*/
     +44X,10H*   RUN:   ,30A1,4H   */
     +44X,1H*,42X,1H*/
     +44X,44H*************************************************/)
C
      WRITE(7,1) (XTITLE(L),L=1,30)
C
      RETURN
      END
```

```
      SUBROUTINE TDSORT(TD,ID,LD,N)
C                                                              810625 085751090
C*****************************************************************************
C*  THIS SUBROUTINE 'BUBBLES UP' TO THE FIRST -LD- POSITIONS IN ARRAY  *
C*  -ID- THE INDEX NUMBERS CORRESPONDING TO THE -LD- HIGHEST           *
C*  VALUES OF ARRAY -TD-.                                             *
C*****************************************************************************
C
      DIMENSION TD(N),ID(N)
C
      DO 7 L=1,LD
        MA=N-L
        DO 6 M=1,MA
          MB=N-M
          IF (ABS(TD(ID(MB+1))).LT.ABS(TD(ID(MB)))) GO TO 6
            IDD=ID(MB+1)
            ID(MB+1)=ID(MB)
            ID(MB)=IDD
    6   CONTINUE
    7 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE SSETXX
C                                                              810625 085751135
C*****************************************************************************
C*  THIS SUBROUTINE INITIALIZES SENSITIVITY ANALYSIS VARIABLES TO      *
C*  DEFAULT VALUES.                                                    *
C*****************************************************************************
C
      COMMON /FINC/ FINC
      COMMON /LDCOND/ LDCOND
      COMMON /LDERV/ LDERV
      COMMON /LDFPR/ LDFPR
      COMMON /LDFR/ LDFR
      COMMON /LDNRTS/ LDNRTS
      COMMON /LDRM/ LDRM
      COMMON /LDRTS/ LDRTS
      COMMON /LDSRU/ LDSRU
      COMMON /LDUP/ LDUP
C
      FINC  =.25
      LDCOND=0
      LDERV =12
      LDFPR =0
      LDFR  =0
      LDNRTS=0
      LDRM  =0
      LDRTS =0
      LDSRU =0
      LDUP  =0
C
      RETURN
      END
```

```
      SUBROUTINE PRMPT1
C                                                              810625 085751454
C*************************************************************************
C*  FIRST OF FOUR PROMPTING SUBROUTINES TO READ IN USER INPUTS FROM      *
C*  THE TERMINAL.  IF THIS IS THE FIRST CALL OF THE LCC:                *
C*    1- PRINT TITLE                                                    *
C*    2- ASK USER WHERE HE WANTS HIS OUTPUT. (PRNTXX=0 TERMINAL ONLY;   *
C*       PRNTXX=1 OFF-LINE ONLY;  PRNTXX=2 BOTH PLACES.)                *
C*    3- ASK USER FOR MIN OR MAX PROMPTING (MAX=LONG PROMPT COMMENTS)   *
C*    4- IF USER REQUEST OFF-LINE OUTPUT, GET A NAME FOR THE RUN.       *
C*  IF THIS IS A SUBSEQUENT CALL FOR THE LCC:                           *
C*    1- NOTIFY USER THAT VARIABLES ARE AS THEY WERE AFTER LAST         *
C*       NAMELISTS WERE SUBMITTED.                                      *
C*    2- ASK USER IF HE WANTS TO REREAD INPUT FILES (RERDXX=1).         *
C*    3- ASK MIN OR MAX PROMPTING ONLY IF LAST RUN WAS MAX PROMPTING.   *
C*    4- ASK USER WHERE HE WANTS HIS OUTPUT. (PRNTXX=0 TERMINAL ONLY;   *
C*       PRNTXX=1 OFF-LINE ONLY; PRNTXX=2 BOTH PLACES)                  *
C*    5- IF USER REQUEST OFF-LINE OUTPUT, GET A NAME FOR THE RUN.       *
C*************************************************************************
C
      COMMON /EXITXX/ EXITXX
      INTEGER EXITXX
      COMMON /FULLXX/ FULLXX
      INTEGER FULLXX
      COMMON /ITERXX/ ITERXX
      COMMON /MAXPMT/ MAXPMT
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      COMMON /RERDXX/ RERDXX
      INTEGER RERDXX
      COMMON /XTITLE/ XTITLE(30)
      DATA BK/1H  ,CHM/1HM ,CHI/1HI/,CHN/1HN/,
     +CHA/1HA/,CHX/1HX/,CHY/1HY/,CHP/1HP/,CHF/1HF/
C
    1 FORMAT(1X/47H AFSATCOM TERMINAL UPGRADES LCC MODEL          )
    2 FORMAT(1X/50H AT THIS POINT, VARIABLE VALUES ARE AS THEY WERE A,
     +13HFTER THE LAST/
     +53H NAMELISTS WERE SUBMITTED.  DO YOU WISH TO RESET NAME,
     +15HLIST G01 OR G02/
     +54H VARIABLES TO THE VALUES FOUND IN THE INPUT FILES (Y O,
     +6HR N)-?)
    3 FORMAT(1X/44H MINIMUM OR MAXIMUM PROMPTING (MIN OR MAX)-?)
    4 FORMAT(3A1)
    5 FORMAT(1X/50H SUBMIT 'MIN' OR 'MAX' STARTING IN COLUMN 1.  NOTH,
     +15HING ELSE WORKS.)
    6 FORMAT(30H OUTPUT AT TERMINAL (Y OR N)-?)
    7 FORMAT(A1)
```

```
    8 FORMAT(49H SUBMIT 'Y' OR 'N' STARTING IN COLUMN 1.  NOTHING,
     +12H ELSE WORKS.)
    9 FORMAT(55H OFF-LINE OUTPUT: FULL, PARTIAL, OR NONE (F, P, OR N)-?)
   10 FORMAT(29H SUBMIT A TITLE FOR THIS RUN:)
   11 FORMAT(30A1)
   12 FORMAT(/50H SET EXITXX=1 IN ANY NAMELIST IF YOU WANT TO EXIT.)
   13 FORMAT(37H SUBMIT 'F', 'P', OR 'N' IN COLUMN 1.,
     +21H  NOTHING ELSE WORKS.)
C
      IF(ITERXX.NE.1) GO TO 16
        WRITE(6,1)
        GO TO 18
   16 CONTINUE
      WRITE(6,2)
      KERDXX=2
      STR1=BK
   17 READ(5,7) STR1
      IF(STR1.EQ.CHY) KERDXX=1
      IF(STR1.EQ.CHN) KERDXX=0
      IF(KERDXX.NE.2) GO TO 18
      WRITE(6,8)
      GO TO 17
   18 CONTINUE
      IF(ITERXX.GT.1.AND.MAXPMT.NE.1) GO TO 20
        WRITE(6,3)
        MAXPMT=2
   19   READ(5,4) STR1,STR2,STR3
        IF(STR1.EQ.CHM.AND.STR2.EQ.CHI.AND.STR3.EQ.CHN) MAXPMT=0
        IF(STR1.EQ.CHM.AND.STR2.EQ.CHA.AND.STR3.EQ.CHX) MAXPMT=1
        IF(MAXPMT.NE.2) GO TO 20
          WRITE(6,5)
          GO TO 19
   20 CONTINUE
      MM1=2
      WRITE(6,6)
   21 READ(5,7) STR1
      IF(STR1.EQ.CHY) MM1=1
      IF(STR1.EQ.CHN) MM1=0
      IF(MM1.NE.2) GO TO 22
        WRITE(6,8)
        GO TO 21
   22 MM2=3
      STR1=BK
      WRITE(6,9)
   23 READ(5,7) STR1
      IF(STR1.EQ.CHF) MM2=2
      IF(STR1.EQ.CHP) MM2=1
```

```
      IF(STR1.EQ.CHN) MM2=0
      IF(MM2.NE.3) GO TO 24
        WRITE(6,13)
        GO TO 23
   24 CONTINUE
      IF(MM2.EQ.0) PRNTXX=0
      IF(MM1.EQ.0.AND.MM2.GE.1) PRNTXX=1
      IF(MM1.EQ.1.AND.MM2.GE.1) PRNTXX=2
      FULLXX=0
      IF(MM2.EQ.2) FULLXX=1
      IF(PRNTXX.EQ.0) GO TO 88
        WRITE(6,10)
        READ(5,11) (XTITLE(L),L=1,30)
   88 IF(MAXPMT.EQ.1.OR.ITERXX.EQ.1) WRITE(6,12)
C
      RETURN
      END
```

```
      SUBROUTINE PRMPT2
C                                                              810625 085753101
C*****************************************************************************
C*  SECOND OF THE PROMPTING ROUTINES.  PROMPTS THE USER FOR NAMELIST   *
C*  /GO1/(WHICH CONTAINS ALL A-M VARIABLES FROM     THE INPUT         *
C*  FILES AND ALLOWS THE USER TO OVERRIDE THOSE VALUES IN REAL TIME).  *
C*****************************************************************************
C
      COMMON /EXITXX/ EXITXX
      INTEGER EXITXX
      COMMON  ITERXX/ ITERXX
      COMMON /MAXPMT/ MAXPMT
      COMMON /RERDXX/ RERDXX
      INTEGER RERDXX
      COMMON /LDERV / LDERV
      COMMON /FINC  / FINC
      COMMON /A/ A(150,4,3)
      INTEGER A
      COMMON /ACPP/ ACPP
      COMMON /AKIT/ AKIT(4,5)
      COMMON /AMPM/ AMPM(5,3)
      COMMON /APFH/ APFH(5,3)
      COMMON  BAA / BAA
      COMMON  BCMH  BCMH(150)
      COMMON /BDATA  BDATA
      INTEGER BDATA
      COMMON /BF  BF
      COMMON /BIRD/ BIRD
      COMMON /BLK/ BLK
      COMMON /BMF/ BMF
      COMMON /BMH  BMH(150)
      COMMON /BNOUN  BNOUN(10,16)
      COMMON /BPLAT/ BPLAT(10)
      INTEGER BPLAT
      COMMON /BRCT/ BRCT
      COMMON /BSP/ BSP(10)
      INTEGER BSP
      COMMON /BTYPE/ BTYPE(10)
      INTEGER BTYPE
      COMMON /CFG/ CFG(3)
      COMMON /COND/ COND(150)
      COMMON /CPD1/ CPD1
      COMMON /CPD2/ CPD2
      COMMON /CPPC/ CPPC
      COMMON /CPPD/ CPPD(3)
      COMMON /CRCT/ CRCT
      COMMON /CSE/ CSE(120)
```

```
COMMON /DAA/ DAA
COMMON /DAD/ DAD
COMMON /DATAB/ DATAB(150)
INTEGER DATAB
COMMON /DATAD/ DATAD(150)
INTEGER DATAD
COMMON /DATAS/ DATAS(120)
INTEGER DATAS
COMMON /DDATA/ DDATA
INTEGER DDATA
COMMON /DLR/ DLR
COMMON /DMF/ DMF
COMMON /DMH/ DMH(150)
COMMON /DRAG/ DRAG(5)
COMMON /DRCT/ DRCT(3)
COMMON /FGH/ FGH(5)
COMMON /FPR/ FPR(150)
COMMON /FR/ FR(3,5)
COMMON /FSEDC/ FSEDC
COMMON /GFE/ GFE(150)
INTEGER GFE
COMMON /HPD1/ HPD1
INTEGER HPD1
COMMON /HPD2/ HPD2
INTEGER HPD2
COMMON /I/ I
COMMON /IMC/ IMC
REAL IMC
COMMON /INOUN/ INOUN(150,24)
REAL INOUN
COMMON /INTEG/ INTEG(150)
REAL INTEG
COMMON /INTNR/ INTNR(5)
REAL INTNR
COMMON /INTR/ INTR(5)
REAL INTR
COMMON /IPCF/ IPCF(150)
REAL IPCF
COMMON /IRMIN/ IRMIN(150,4)
COMMON /K/ K(5)
REAL K
COMMON /KFAC/ KFAC(4)
REAL KFAC
COMMON /L/ L
COMMON /LE/ LE(5)
COMMON /LFAC/ LFAC(150)
REAL LFAC
```

```
      COMMON /LO/ LO(10)
      COMMON /LRU/ LRU(150)
      COMMON /MIFIX/ MIFIX(3,5)
      REAL MIFIX
      COMMON /MILR/ MILR(3)
      REAL MILR
      COMMON /MIMH/ MIMH(4,3,5)
      REAL MIMH
      COMMON /MMPD/ MMPD(5,3)
      REAL MMPD
      COMMON /MMPM/ MMPM(5)
      REAL MMPM
      COMMON /MRF/ MRF
      REAL MRF
      COMMON /MRO/ MRO
      REAL MRO
      COMMON /MSE/ MSE(120)
      REAL MSE
      COMMON /MTBMI/ MTBMI(150,4)
      REAL MTBMI
      COMMON /MUSE/ MUSE
      REAL MUSE
C
      NAMELIST /GO1/ EXITXX,A,ACPP,AKIT,AMPM,APFH,BAA,BCMH,BDATA,BF,
     +       BIRD,BLR,BMF,BMH,BNOUN,BPLAT,BRCT,BSP,BTYPE,CFG,COND,CPD1,
     +       CPD2,CPPC,CPPD,CRCT,CSE,DAA,DAD,DATAB,DATAD,DATAS,DDATA,DLR,
     +       DMF,DMH,DRAG,DRCT,FGH,FPK,FR,FSEDC,GFE,HPD1,HPD2,I,IMC,
     +       INOUN,INTEG,INTNR,INTR,IPCF,IRMIN,K,KFAC,L,LE,LFAC,LO,LRU,
     +       MIFIX,MILR,MIMH,MMPD,MMPM,MRF,MRO,MSE,MTBMI,MUSE
C
    1 FORMAT(1X)
    2 FORMAT(52H  NAMELIST /GO1/ CONTAINS ALL VARIABLES FOUND IN THE,
     +13H INPUT FILES /
     +40H  THAT BEGIN WITH THE LETTERS A TO M.    )
    3 FORMAT(53H  AT THIS POINT, NAMELIST /GO1/ VARIABLES CONTAIN VAL,
     +13HUES AS IN THE /
     +14H  INPUT FILES.)
    4 FORMAT(53H  AT THIS POINT, NAMELIST /GO1/ VARIABLES ARE AS THEY,
     +11H WERE AFTER/
     +40H  THE LAST NAMELIST /GO1/ WAS SUBMITTED.)
    5 FORMAT(54H  TO USE THESE VALUES, SUBMIT AN EMPTY NAMELIST /GO1/./
     +50H  TO OVERIDE ANY OF THESE VALUES, SUBMIT A NON-EMP,
     +18HTY NAMELIST /GO1/.)
    6 FORMAT(42H SUBMIT NAMELIST /GO1/ IN NAMELIST FORMAT:)
C
      WRITE(6,1)
      IF(MAXPMT.NE.1) GO TO 30
```

```
      WRITE(6,2)
      IF(ITERXX.EQ.1.OR.RERDXX.EQ.1) WRITE(6,3)
      IF(ITERXX.GT.1.AND.RERDXX.NE.1) WRITE(6,4)
      WRITE(6,5)
30    WRITE(6,6)
      READ(5,601)
      IF(EXITXX.EQ.1) RETURN
C
      RETURN
      END
```

```
      SUBROUTINE PRMPT3
C                                                              810625 085756562
C*****************************************************************************
C*  THIRD  OF THE PROMPTING ROUTINES.  PROMPTS THE USER FOR NAMELISTS  *
C*  /GO2/(WHICH CONTAINS ALL N-Z VARIABLES FROM     THE INPUT          *
C*  FILES AND ALLOWS THE USER TO OVERRIDE THOSE VALUES IN REAL TIME)   *
C*  AND /SENS/ (WHICH CONTAINS SENSITIVITY ANALYSIS PRINT PARAMETERS). *
C*****************************************************************************
C
      COMMON /EXITXX/ EXITXX
      INTEGER EXITXX
      COMMON /ITERXX/ ITERXX
      COMMON /MAXPMT/ MAXPMT
      COMMON /RERDXX/ RERDXX
      INTEGER RERDXX
      COMMON /LDERV / LDERV
      COMMON /FINC  / FINC
      COMMON /LDCOND/ LDCOND
      COMMON /LDFPR/ LDFPR
      COMMON /LDFR/ LDFR
      COMMON /LDNRTS/ LDNRTS
      COMMON /LDRM/ LDRM
      COMMON /LDRTS/ LDRTS
      COMMON /LDSRU/ LDSRU
      COMMON /LDUP/ LDUP
      COMMON /NAE/ NAE(5)
      REAL NAE
      COMMON /NBC/ NBC(10)
      REAL NBC
      COMMON /NHB/ NHB(10)
      COMMON /NHI/ NHI(150)
      COMMON /NITEM/ NITEM(150,5)
      REAL NITEM
      COMMON /NJA/ NJA(150,4)
      COMMON /NPLT/ NPLT(5,10)
      REAL NPLT
      COMMON /NRM/ NRM(150)
      COMMON /NRMI/ NRMI(5)
      REAL NRMI
      COMMON /NRTS/ NRTS(150)
      REAL NRTS
      COMMON /NRUC/ NRUC
      REAL NRUC
      COMMON /NTRMP/ NTRMP(5)
      REAL NTRMP
      COMMON /OST/ OST(3)
      COMMON /OSTC/ OSTC
```

```
COMMON  PA  PA(150)
COMMON  PAL1/ PAL1
COMMON /PAL2B/ PAL2B
COMMON  PAL2D/ PAL2D
COMMON /PDIV/ PDIV(5)
COMMON /PIUP/ PIUP
COMMON /PMLR/ PMLR
COMMON /PNOUN/ PNOUN(5,12)
COMMON /PTNUM/ PTNUM(150,12)
COMMON /QSA/ QSA(150,4,3)
COMMON /QTYP1/ QTYP1
INTEGER QTYP1
COMMON /QTYP2B/ QTYP2B
INTEGER QTYP2B
COMMON /QTYP2D/ QTYP2D
INTEGER QTYP2D
COMMON /R/ R
INTEGER R
COMMON /RCPP/ RCPP
COMMON /RIP/ RIP(150)
COMMON /RL/ RL(150)
INTEGER RL
COMMON /RM/ RM(150)
COMMON /RMC/ RMC
COMMON /RMH/ RMH(150)
COMMON /RTS/ RTS(150)
COMMON /SA/ SA
COMMON /SEDEV/ SEDEV(120)
COMMON /SENOUN/ SENOUN(120,20)
COMMON /SENUM/ SENUM(120,12)
COMMON /SETYPE/ SETYPE(120)
INTEGER SETYPE
COMMON /SPC1/ SPC1
INTEGER SPC1
COMMON /SPC2/ SPC2
INTEGER SPC2
COMMON /SR/ SR
COMMON /TEFM/ TEFM
COMMON /TFAC/ TFAC(5)
COMMON /THRS/ THRS(5)
COMMON /TIME1/ TIME1(150)
INTEGER TIME1
COMMON /TNB/ TNB(10)
COMMON /TNLR/ TNLR
COMMON /TORB/ TORB
COMMON /TORD/ TORD
COMMON /TR/ TR
```

```
      COMMON /TRAVB/ TRAVB
      COMMON /TRAV1D/ TRAV1D
      COMMON /TYP2TF/ TYP2TF
      COMMON /UCPP/ UCPP
      COMMON /UCTDEV/ UCTDEV(150)
      COMMON /UP/ UP(150)
      COMMON /WT/ WT(150)
      COMMON /XFPR/ XFPR
      COMMON /XFR/ XFR
      COMMON /XMIL/ XMIL
      COMMON /XUC/ XUC
C
      NAMELIST /SENS/ EXITXX,LDERV ,FINC  ,LDCOND,LDFPR ,LDFR  ,LDNRTS,
     +      LDRM  ,LDRTS ,LDSRU ,LDUP
      NAMELIST /GO2/ EXITXX,NAE,NBC,NHB,NHI,NITEM,NJA,NPLT,NRM,NRMI,
     +      NRTS,NRUC,NTRMP,OST,OSTC,PA,PAL1,PAL2B,PAL2D,PDIV,PIUP,PMLR,
     +      PNOUN,PTNUM,QSA,QTYP1,QTYP2B,QTYP2D,R,RCPP,RIP,RL,RM,RMC,
     +      RMH,RTS,SA,SEDEV,SENOUN,SENUM,SETYPE,SPC1,SPC2,SR,TEFM,TFAC,
     +      THRS,TIME1,TNB,TNLR,TORB,TORD,TR,TRAVB,TRAV1D,TYP2TF,UCPP,
     +      UCTDEV,UP,WT,XFPR,XFR,XMIL,XUC
C
    1 FORMAT(1X)
    2 FORMAT(52H  NAMELIST /GO2/ CONTAINS ALL VARIABLES FOUND IN THE,
     +13H INPUT FILES /
     +40H  THAT BEGIN WITH THE LETTERS N TO Z.    )
    3 FORMAT(53H  AT THIS POINT, NAMELIST /GO2/ VARIABLES CONTAIN VAL,
     +13HUES AS IN THE/
     +14H  INPUT FILES.)
    4 FORMAT(53H  AT THIS POINT, NAMELIST /GO2/ VARIABLES ARE AS THEY,
     +11H WERE AFTER/
     +40H  THE LAST NAMELIST /GO2/ WAS SUBMITTED.)
    5 FORMAT(54H  TO USE THESE VALUES, SUBMIT AN EMPTY NAMELIST /GO2/./
     +50H  TO OVERIDE ANY OF THESE VALUES, SUBMIT A NON-EMP,
     +18HTY NAMELIST /GO2/.)
    6 FORMAT(42H SUBMIT NAMELIST /GO2/ IN NAMELIST FORMAT:)
    7 FORMAT(53H  NAMELIST /SENS/ CONTAINS VARIABLES THAT CONTROL THE/
     +53H  DISPLAY OF THE SENSITIVITY ANALYSIS.                )
    8 FORMAT(53H  AT THIS POINT, THE TERMINAL DISPLAYS SENSITIVITY WI,
     +18HTH RESPECT TO ONLY/
     +63H  GLOBAL SENSITIVITY VARIABLES.
     +)
    9 FORMAT(52H  AT THIS POINT, THE TERMINAL SENSITIVITY DISPLAY IS/
     +32H  AS IT WAS ON THE PREVIOUS RUN.)
   10 FORMAT(53H  FOR THE SAME TERMINAL DISPLAY, SUBMIT AN EMPTY NAME,
     +12HLIST /SENS/./
     +54H  FOR A DIFFERENT TERMINAL DISPLAY, SUBMIT A NON-EMPTY,
     +17H NAMELIST /SENS/.)
```

```
   11 FORMAT(43H SUBMIT NAMELIST /SENS/ IN NAMELIST FORMAT:)
C
      WRITE(6,1)
      IF(MAXPMT.NE.1) GO TO 30
        WRITE(6,2)
        IF(ITERXX.EQ.1.OR.RERDXX.EQ.1) WRITE(6,3)
        IF(ITERXX.GT.1.AND.RERDXX.NE.1) WRITE(6,4)
        WRITE(6,5)
   30 WRITE(6,6)
      READ(5,G02)
      IF(EXITXX.EQ.1) RETURN
      WRITE(6,1)
      IF(MAXPMT.NE.1) GO TO 31
        LDTOT=0+LDFPR +LDSRU +LDFR  +LDUP  +LDCOND+LDNRTS+LDRTS +LDRM
        WRITE(6,7)
        IF(LDTOT.EQ.0) WRITE(6,8)
        IF(LDTOT.NE.0) WRITE(6,9)
        WRITE(6,10)
   31 WRITE(6,11)
      READ(5,SENS)
C
      RETURN
      END
```

```
      SUBROUTINE PRMPT4
C                                                          810625 085801825
C*************************************************************************
C*  4TH   OF PROMPTING ROUTINES THAT TELLS USER THAT LCC HAS BEEN       *
C*  COMPLETED AND THAT GIVES THE USER A CHANCE TO EXIT.                 *
C*************************************************************************
C
      COMMON /MAXPMT/ MAXPMT
      COMMON /EXITXX/ EXITXX
      INTEGER EXITXX
C
      DATA ECHAR/1HE/,BK/1H /
C
    2 FORMAT(1X/15H LCC COMPLETED.)
    3 FORMAT(49H IF YOU WISH TO EXIT, HIT -E-, THEN HIT -RETURN-;,
     +12H  OTHERWISE,)
    4 FORMAT(46H ADJUST TERMINAL TO NEW PAGE AND HIT -RETURN-.)
    5 FORMAT(A1)
C
      STR=BK
      WRITE(6,2)
      IF(MAXPMT.EQ.1) WRITE(6,3)
      WRITE(6,4)
      READ(5,5) STR
      IF(STR.EQ.ECHAR) EXITXX=1
C
      RETURN
      END
```

```
      SUBROUTINE PRMPT5
C                                                          810625 085801971
C*****************************************************************************
C*  5TH   OF PROMPTING ROUTINES.                                             *
C*                      GIVES THE USER A CHANCE TO EXIT.                     *
C*****************************************************************************
C
      COMMON /MAXPMT/ MAXPMT
      COMMON /EXITXX/ EXITXX
      INTEGER EXITXX
C
      DATA ECHAR/1HE/,BK/1H /
C
    3 FORMAT(49H IF YOU WISH TO EXIT, HIT -E-, THEN HIT -RETURN-;,
     +12H  OTHERWISE,)
    4 FORMAT(46H ADJUST TERMINAL TO NEW PAGE AND HIT -RETURN-.)
    5 FORMAT(A1)
C
      STR=BK
      IF(MAXPMT.EQ.1) WRITE(6,3)
      WRITE(6,4)
      READ(5,5) STR
      IF(STR.EQ.ECHAR) EXITXX=1
C
      RETURN
      END
```

```
      SUBROUTINE PRMPT6
C                                                              810625 085802128
C*****************************************************************************
C*  SIXTH  AND FINAL PROMPTING ROUTINE TO ASK IF ANOTHER RUN IS              *
C*  DESIRED.  IF SO, REDOXX=1.  IF NOT, REDOXX=0.                            *
C*****************************************************************************
C
      COMMON /REDOXX/ REDOXX
      INTEGER REDOXX
C
      DATA YES/1HY/,CNO/1HN/
C
    1 FORMAT(1X/23H ANOTHER RUN (Y OR N)-?)
    2 FORMAT(A1)
    3 FORMAT(49H SUBMIT 'Y' OR 'N' STARTING IN COLUMN 1.  NOTHING,
     +12H ELSE WORKS.)
C
      REDOXX=2
      WRITE(6,1)
    4 READ(5,2) STR
      IF(STR.EQ.YES) REDOXX=1
      IF(STR.EQ.CNO) REDOXX=0
      IF(REDOXX.NE.2) GO TO 5
        WRITE(6,3)
        GO TO 4
    5 CONTINUE
C
      RETURN
      END
```

CROSS REFERENCE LISTING

The following tables contain cross reference listings for the LCC Program. Included are maximum dimensions of indicies and cross references listings of variables by subroutines and subroutines by variables. These cross reference tables were generated by AUTOLCC, the program used to generate the ATU LCC Model.

Several functions are labelled differently in the FORTRAN code and the cross reference listing. This is due to the manner in which AUTOLCC handles functions. The lists below give the names found in the FORTRAN code and the cross reference listing for the renamed functions:

FORTRAN Listing	Cross Reference Listing
U	UU
F	FF
XLEARN	LCC
CHLC	CHLCC

TABLE 1
INDICES USED IN THE LCC MODEL COMPUTER PROGRAM

INDEX	MAXIMUM #ENTRIES	VARIABLE HOLDING ACTUAL #ENTRIES	REFERENCE ARRAY	CROSS-REFERENCE ARRAY	RANGE
B	10	MXNS	BIND	BXREF	1
DUM	150	MXI	DUMIND	DIXREF	1
I	150	MXI	IND	IXREF	150
IA	4	NIA	IAIND	IAXREF	1
IRM	4	MXIRM	IRMIND	IRMXRF	1
IRMT	4	MXIRMT	IRMTIND	IRMTXR	1
K1TEMP	4	MXKT	K1IND	XK1IND	1
K2TEMP	3	MXKTE	K2IND	XK2IND	1
L	120	MXL	SFIND	LXREF	120
LT	3	MXLT	LTIND	LTXREF	1
M	3	MXM	MIND	MXREF	1
NP	5	MXNP	NPIND	NPXREF	1
NS	10	MXNS	NSIND	NSXREF	1

TABLE 2
POINTER ARRAYS USED IN THE LCC MODEL COMPUTER PROGRAM

ARRAY HOLDING RELEVANT COLUMN INDEX #S	ARRAY HOLDING #COLUMN INDICES IN ROW	ARRAY HOLDING QUANTITIES	MAX# COLUMN INDICES PER ROW	ROW INDEX	COLUMN INDEX

TABLE 3
SENSITIVITY VARIABLES

ARRAY HOLDING CHANGE IN LOC	ID ARRAY FOR SORTING	FLAG VARIABLE FOR INTERNAL CHECKS	INDEX
TDCOND	IDCOND	LDCOND	I
TDFPR	IDFPR	LDFPR	I
TDFR	IDFR	LDFR	I
TDMF			
TDNRTS	IDNRTS	LDNRTS	I
TDPIUP			
TDRM	IDRM	LDRM	I
TDRTS	IDRTS	LDRTS	I
TDSRU	IDSRU	LDSRU	I
TDUP	IDUP	LDUP	I
TDXFPR			
TDXFR			
TDXMIL			
TDXRV			
TDXUC			

TABLE 4
LIFE CYCLE COST MODEL CROSS-REFERENCE TABLE
SUBROUTINES BY VARIABLES

	VARIABLES READ	VARIABLES ASSIGNED VALUES	VARIABLES USED	VARIABLES WRITTEN
INPUT SUBS				
READ1	PIOP ,FSEDC ,R , TEFM ,BMF ,OSTC , BLR ,CPD1 ,CPD2 , MILR ,MUSE ,XFPR , CLR ,DMF ,BAA , MRF ,DAA ,QTYP1 , ACPP ,SA ,PNLR , RCPP ,TRAV1D,TYP2TF, DAD ,TRAVB ,CRCT , PAL2D ,BF ,PAL1 , PAL2B ,MRO ,UCPP , TR ,IMC ,CPR , CPPD ,BDATA ,KFAC , DDATA ,TORB ,TORD , XFR ,NRUC ,XMIL , BIRD ,HPD1 ,HPD2 , SPC2 ,RMC ,QTYP2B, QTYP2D,SPC1 ,OST , CFG ,XUC ,TNLR , BRCT ,DRCT ,SR			
READ2	TNB ,BTYPE ,NHB , NBC ,BPLAT ,LG , BSP ,BNOUN	MXNS	NS	
READ3	FGH ,MMPD ,MMPM , AMPM ,TFAC ,LE , THRS ,APFH ,PNOUN	MXNP	M ,NP	
READ4	NTRMP ,FR ,K , NRMI ,PDIV ,INTNR , INTR ,NAE ,DRAG	MXNP	M ,NP	
READ5	MILIX ,AKIT ,MIMH	MXNP	M ,IA ,NF	
READ6	NPLT	MXNP	NS ,NP	
READ7	SENOUN,MSE ,SENOV , SEDEV ,DATAS ,CSE , L ,SETYPE	MXL ,SEINO	L	

TABLE 4
LIFE CYCLE COST MODEL CROSS-REFERENCE TABLE
SUBROUTINES BY VARIABLES
(CONTINUED)

	VARIABLES READ	VARIABLES ASSIGNED VALUES	VARIABLES USED	VARIABLES WRITTEN
READ8	LFAC ,LRU ,UF , RM ,PTNUM ,INOUN , PA ,INTEG ,I , WT ,NHI ,GFE	INO ,MXI	I	
READ9A	RL ,BCMH ,NRTS , COND ,RTS ,FRR , I ,RIP ,MTBMI , IPCF ,RMH ,BMH , DMH	INO ,MXI ,WEAR	COND ,I	
READ9B	UCTDEV,DATAD ,DATAB , I ,TIME1	INO ,MXI	I	
READ10	NRM ,A ,IRMIN , QS1 ,I ,NSA	INO ,MXI	NRM ,I	
READ11	NITEM ,I	INO ,MXI	NP ,I	
CALC SUBS				
INITAX		USE ,BRSC ,ISCD , SECBP ,BSECP ,BDLC , TUCTDC,NFD ,SECBC , ISET ,TERMH ,IIMCB , ERHAB ,SEPC ,OLCP , AFMC ,SECDP ,OLCT , MTRC ,SECC ,BISC , ONMC ,TDC ,TERHD , IMTRC ,SECDC ,ISCB , SECII ,SECP ,SECR , BAFC ,BXTRC ,SECRP , ERHD ,IIMCA ,OFMCA , BTCDI ,TERHB ,BIIMC , TIAC ,ONMCA ,BMTRC , STDC ,MTRCI ,FPLT , DXTRC ,BS ,OFMCD , INCTD ,USED ,BONMC , FAIL ,STDCI ,TERMI , FRM ,SEDC ,SEDIC , SECRC ,OFMCB ,AFC , SECIP ,SETDC ,IIMCI , IIMCR ,RSC ,IIMCD , XITEMQ,BSECC ,ERHAD , STDCR ,BOFMC	INO ,MXL ,MXNS , MXI ,NS ,I , SEINO ,L	

TABLE 4
LIFE CYCLE COST MODEL CROSS-REFERENCE TABLE
SUBROUTINES BY VARIABLES
(CONTINUED)

	VARIABLES READ	VARIABLES ASSIGNED VALUES	VARIABLES USED	VARIABLES WRITTEN
ZFAIL		FAIL	INC ,NPLT ,MXNP , YFAC ,MXNS ,MXI , NS ,NP ,NITEM , KFAC ,LE ,FAIL , I ,XFR ,RIP , LO ,MTBMI ,AVFH	
ZNFB		NFD ,NFB	TNF ,B ,BTYPE , NHF ,OSTC ,NFD , XFER ,LRU ,NSC , INC ,NRTS ,COND , MXNS ,RTS ,DAD , CRCT ,MXI ,NS , FPR ,FAIL ,I , LO ,NHI ,OST , BRCT ,DRCT	
ZERHB		EBCBI ,ERHBI ,ERHD , ERTBI	TNF ,B ,BTYPE , BMF ,NHB ,EBCB , XFER ,BCMH ,LRU , DMF ,NBC ,INC , NRTS ,COND ,ERHD , MXNS ,RTS ,MXI , NS ,FPR ,FAIL , I ,NHI ,BCMH , DMR ,ERTBI	
ZERHSE		ERHAB ,L ,RMI , ERHA	NRM ,EBCBI ,ERHAB , IRMT ,INC ,ERHD , MXNS ,MXI ,NS , A ,IRMIN ,QSA , MXLT ,J ,BSP , LT ,L ,RMI , NJA ,ERHAD ,MXIRMT, ERTBI	
ZISET		ISET ,ISETD ,L	NRM ,ISET ,IRMT , INC ,ERHBI ,ERHD , MXNS ,MXI ,NS , A ,IRMIN ,QSA , ISETD ,MXLT ,I , LT ,L ,RMI , NJA ,MXIRMT	

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TABLE 4
LIFE CYCLE COST MODEL CROSS-REFERENCE TABLE
SUBROUTINES BY VARIABLES
(CONTINUED)

	VARIABLES READ	VARIABLES ASSIGNED VALUES	VARIABLES USED	VARIABLES WRITTEN
ZUSE		USE ,USED	ERHAB ,MUSE ,BAA , DAA ,MXL ,MXNS , NS ,SEINO ,L , SETYPE,ERHAD	
ZTYPE		SAT ,CIMF	BTYPE ,MXNS ,NS	
ZTFR		FPLT ,TFR ,FPM	PIVP ,TNB ,INO , NPLT ,MXNP ,TFAC , MXNS ,MXI ,NS , NP ,NITEM ,FAIL , I ,FPM ,LO , APFH	
ZSECI		TUCTDC,ERHA ,TERHD , SECI ,UCTDC ,TERHB , PBDV ,PDDV ,SEDV , NSED ,SECD ,SECB , L ,NSEB	PIVP ,TNB ,NRM , TUCTDC,MSE ,ISET , ERHAB ,UCTDEV,ERHA , BAA ,IRMT ,DAA , TERHD ,INO ,COND , MXL ,SECI ,ERHBI , ERHD ,MXNS ,UCTDC , MXI ,TERHB ,NS , A ,IRMIN ,QSA , ISETD ,MXLT ,PBDV , PDDV ,I ,SEINO , SECEV ,SEDV ,LT , NSED ,CSE ,SECD , SECB ,L ,RMI , NUA ,SETYPE,ERHAD , MXIRMT,NSEB	
ZPMEQ		PMEQ	TNE ,LRU ,INO , NPLT ,MXNP ,MXNS , MXI ,NS ,NP , NITEM ,I	
ZTISQ		TISQ ,DS	TNE ,NFD ,INO , NFB ,MXNS ,MXI , TISQ ,NS ,DS , I	
ZYRSQ		YRSQ	TNE ,INO ,COND , MXNS ,MXI ,NS , FAIL ,I ,NHI	

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TABLE 4
LIFE CYCLE COST MODEL CROSS-REFERENCE TABLE
SUBROUTINES BY VARIABLES
(CONTINUED)

	VARIABLES READ	VARIABLES ASSIGNED VALUES	VARIABLES USED	VARIABLES WRITTEN
ZTOTPQ		TOTPQ	INC ,PMEQ ,MXI , TISQ ,I ,NRUC , YRSQ	
ZLC		LC	INC ,MXI ,I	
UU				
FF			BF	
LCC			LFAC ,I ,XITEMQ, TOTPQ	
COST1		TERMH ,HDWRT ,HDWRIT, PRODC ,LUP ,TERMC , TOTT ,TERMI	TNF ,TERMH ,HDWRT , LRC ,LC ,HDWRIT, UP ,LUP ,INC , NPLT ,MXNP ,MXNS , MXI ,NS ,NP , NITEM ,TOTT ,INTNR , INTR ,I ,TERMI , XUC	
COST2		IMICA ,MIC ,RMICA	NIA ,TNB ,M , FR ,IMICA ,MILR , IA ,NPLT ,MXNP , MXNS ,NRMI ,NS , NP ,RMICA ,PDIV , MIFIX ,XMIL ,MXM , AKIT ,MIMH	
COST3		BOLC ,OLCP ,OLCT , BAFC ,OC ,AFC , OLC	PIUP ,TNB ,BTYPE , BOLC ,OLCP ,OLCT , FGH ,MMPD ,MMPM , PMIR ,AMPM ,K , NPLT ,BAFC ,MXNP , MXNS ,BPLAT ,NS , NP ,THRS ,NAE , LO ,DRAG ,APFH , AFC ,CFG ,TNLR , OLC	

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TABLE 4
LIFE CYCLE COST MODEL CROSS-REFERENCE TABLE
SUBROUTINES BY VARIABLES
(CONTINUED)

	VARIABLES READ	VARIABLES ASSIGNED VALUES	VARIABLES USED	VARIABLES WRITTEN
COST4		ISCD ,BISC ,ISCB , BS ,ISC ,DS , ISCA	TNB ,BTYPE ,ISCD , NFB ,LC ,BISC , UP ,ISCB ,INO , NFB ,MXNS ,BPLAT , MXI ,TISQ ,NS , BS ,DS ,I , ISCA ,XUC	
COST5		BRSC ,RSCA ,RSC	PIUP ,TNB ,BTYPE , BRSC ,RSCA ,LRU , LC ,UP ,INO , COND ,MXNS ,BPLAT , MXI ,NS ,RM , FAIL ,I ,NRUC , NHI ,RSC ,XUC	
COST6		ONMC ,ONMCA ,BONMC	PIUP ,TNB ,BTYPE , BMF ,BLR ,XFPR , LRU ,ONMC ,INO , NPIT ,MXNP ,TFAC , MXNS ,BPLAT ,MXI , NS ,NP ,ONMCA , NITEM ,KFAC ,LE , BONMC ,FPR ,FAIL , I ,XFR ,RIP , LO ,MTBMI ,IPCF , RMH ,APFH	
COST7		TCFD ,TCFB ,OFMCA , OFMCD ,OFMCB ,OFMC , BOFMC	PIUP ,TNB ,BTYPE , BMF ,NHB ,BLR , XFPR ,BCMH ,DLR , LRU ,DMF ,MRF , TCFD ,INO ,NRTS , COND ,TCFB ,MXNS , OFMCA ,RTS ,BPLAT , MXI ,NS ,MRO , TR ,CPPC ,CYPD , OFMCD ,FPR ,FAIL , I ,WT ,RIP , LO ,NHI ,OFMCB , BMH ,DMH ,BOFMC , SR	

TABLE 4
LIFE CYCLE COST MODEL CROSS-REFERENCE TABLE
SUBROUTINES BY VARIABLES
(CONTINUED)

	VARIABLES READ	VARIABLES ASSIGNED VALUES	VARIABLES USED	VARIABLES WRITTEN
COST8		SECBP ,BSECP ,TSEC , SECBC ,SEPC ,SECDP , SECC ,SECDC ,SECII , SECP ,SECR ,SECRP , SEDC ,SECIC ,SECRC , SECIP ,BSECC	PIUP ,TNB ,BTYPE , BSECP ,TUCTDC,MSE , SEPC ,SECDP ,SECDC , SECII ,SECR ,DUM , MXI ,SECRP ,MXNS , BPLAT ,MXI ,NS , SEINO ,SEDC ,SECIC , SECV ,SECRC ,NSED , CSF ,SECIP ,L , SETYPE,BSECC ,NSEB	
COST9		IIMCB ,IIMC ,IIMCA , BIIMC ,IIMCI ,IIMCR , IIMCD	PIUP ,TNB ,BTYPE , IIMCB ,LRU ,SA , INC ,NFB ,COND , IIMCA ,MXNS ,RTS , BPLAT ,SAT ,MXI , NS ,BIIMC ,IMC , PA ,FAIL ,I , NHI ,RMC ,IIMCI , IIMCR ,IIMCD	
COST10		PPSE ,TDC ,TNSE , STDC ,STDCI ,SETDC , L ,BTDC ,STDCR	PIUP ,TNB ,BTYPE , NRM ,EBCBI ,ERHAB , IRMT ,PPSE ,ONMC , ACFP ,TNSE ,RCPP , INC ,DATAD ,MXL , ERHD ,MXNS ,OFMCA , MXI ,NS ,UCPP , A ,ONMCA ,IRMIN , STDC ,BDATA ,DATAB , DDATA ,QSA ,MXLT , I ,STDCI ,SEINO , LT ,DATAS ,NSED , OFMC ,L ,RMI , BTDC ,NJA ,ERHAD , MXIRMT,NSEB ,ERTBI	

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TABLE 4
LIFE CYCLE COST MODEL CROSS-REFERENCE TABLE
SUBROUTINES BY VARIABLES
(CONTINUED)

	VARIABLES READ	VARIABLES ASSIGNED VALUES	VARIABLES USED	VARIABLES WRITTEN
COST11		T2BA ,MTRC ,IMTRC , T2DA ,RMTRC ,BMTRC , MTRCI ,DMTRC	PIUP ,T2BA ,TOFM , CPD1 ,CPD2 ,MTRC , QTYP1 ,IMTRC ,IND , TRAV1D,COND ,TYP2TF, MXNP ,MXNS ,TRAVB , PAL2D ,MXI ,NS , PAL1 ,PAL2B ,T2DA , NP ,BMTRC ,NITEM , TOFB ,TORD ,I , HPD1 ,HPD2 ,SPC2 , QTYP2B,QTYP2D,SPC1 , TIME1 ,ERTBI	
CHEC		L ,XITEMQ	PIUP ,USE ,TNB , B ,BTYPE ,BMF , NRM ,NHB ,MSE , NFC ,RSCA ,ISET , BLP ,ERHAB ,XFPR , BCMH ,DLR ,LRU , DMF ,BAA ,IRMT , HDWRIT,NBC ,DAA , UP ,SA ,NFB , NRTS ,COND ,MXL , MXNP ,MXNS ,RTS , SAT ,DAD ,CRCT , NS ,RM ,NP , A ,CPPD ,IRMIN , NITEM ,TOTT ,PA , QSA ,ISETD ,USED , MXLT ,FPR ,FAIL , I ,WT ,SEINO , NRLC ,LO ,ISCA , NHI ,LT ,CIMF , NSFD ,BMH ,CSF , DMH ,L ,RMI , OST ,NUA ,XUC , BRCT ,ERHAD ,MAIRMT, DRCT ,NSEB	

OUTPUT SUBS

TABLE 4
LIFE CYCLE COST MODEL CROSS-REFERENCE TABLE
SUBROUTINES BY VARIABLES
(CONTINUED)

	VARIABLES READ	VARIABLES ASSIGNED VALUES	VARIABLES USED	VARIABLES WRITTEN
ERRCK1		NERRYY	M ,NERRYY,LRU , INC ,NRTS ,COND , MXNP ,RTS ,MXI , NP ,NITEM ,L , I ,MTBMI ,MXM , NHI ,NJA	M ,LE ,I
RLCOMP		RL ,NRTS ,COND , RTS	R ,RL ,LRU , INC ,COND ,RTS , MXI ,WEAR ,I , BIRD	
DTABST				PIUP ,R ,XFPR , FINC ,XFR ,XMIL , XUC
ITAB1A				BMF ,BLR ,MILR , DLR ,DMF ,BAA , MRF ,DAA ,PMLR , *TRAV1D,TRAVB ,PAL2D , PAL1 ,PAL2B ,MRO , TR ,TORB ,TORD , HPD2 ,TNLR ,SR
ITAB1B				OSTC ,CPD2 ,ACPP , SA ,RCPP ,DAD , CRCT ,UCPP ,IMC , CPPC ,CPPD ,RMC , OST ,CFG ,BRCT , DRCT
ITAB1C				PIUP ,FSEDC ,R , TEFM ,CPD1 ,MUSE , XFPR ,QTYP1 ,TYP2TF, BF ,BDATA ,KFAC , DDATA ,XFR ,NRUC , XMIL ,BIRD ,HPD1 , SPC2 ,QTYP2B,QTYP2D, SPC1 ,XUC
ITAB2			MXNS ,NS	TNB ,BTYPE ,NHB , NBC ,BPLAT ,NS , LO ,BSP ,BNOUN

TABLE 4
LIFE CYCLE COST MODEL CROSS-REFERENCE TABLE
SUBROUTINES BY VARIABLES
(CONTINUED)

	VARIABLES READ	VARIABLES ASSIGNED VALUES	VARIABLES USED	VARIABLES WRITTEN
ITAB3			M ,MXNP ,NP	FGH ,MMPD ,MMPM , AMPM ,TFAC ,NP , LE ,THRS ,APFH , PNOUN
ITAB4			M ,MXNP ,NRMI , NP ,INTNR ,INTR	NTRMP ,FR ,K , NP ,PDIV ,NAE , DRAG
ITAB5			M ,IA ,MXNP , NP	NP ,MIFIX ,AKIT , MIMH
ITAB6			MXNP ,NS ,NP	NPLT ,NP
ITAB7			MXI ,SEINO ,L	SENOUN,MSE ,SENUM , SEDEV ,DATAS ,CSE , L ,SETYPE
ITAB8			INC ,MXI ,I	LFAC ,LRU ,UP , RM ,PTNUM ,INOUN , PA ,INTEG ,I , WT ,NHI ,GFE
ITAB9A			INC ,MXI ,I	RL ,BCMH ,NRTS , COND ,RTS ,FPR , I ,RIP ,MTBMI , IPCF ,RMH ,BMH , DMH
ITAB9B			INC ,MXI ,I	UCTDEV,DATAD ,DATAB , I ,TIME1
ITB10A			IRMT ,INC ,MXI , IRMIN ,I ,MXIRMT	A ,QSA ,I , NJA
ITB10B			IRMT ,INC ,MXI , IRMIN ,I ,MXIRMT	A ,QSA ,I , NJA
ITB10C			IRMT ,INC ,MXI , IRMIN ,I ,MXIRMT	A ,QSA ,I , NJA
ITB10D			IRMT ,INC ,MXI , IRMIN ,I ,MXIRMT	A ,QSA ,I , NJA
ITAB11			INC ,MXI ,NP , I	NITEM ,I

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TABLE 4
LIFE CYCLE COST MODEL CROSS-REFERENCE TABLE
SUBROUTINES BY VARIABLES
(CONTINUED)

	VARIABLES READ	VARIABLES ASSIGNED VALUES	VARIABLES USED	VARIABLES WRITTEN
OTAB1			FSFDC ,TSEC ,TERMH , SEFC ,IIMC ,MTBC , ONMC ,MIC ,STDC , ISC ,TERMI ,SEDC , OC ,OFMC ,RSC	
OTAB2		TMIL	NIA ,TNB ,M , FR ,MILR ,IA , NPLT ,MXNP ,MXNS , NS ,NP ,TMIL , MIFIX ,XMIL ,MXM , AKJT ,MIMH	NP ,TMIL ,PNOUN
OTAB3A			BRSC ,ISCD ,BOLC , BISC ,ONMC ,ISCB , BAFC ,ISC ,OFMCD , BONMC ,OFMCB ,OFMC , AFC ,RSC ,OLC , BOFMC	
OTAB3B		DTDC ,BTDCT ,BTDCM , BTDCG ,BTDCI ,BTDCC , BTDCS ,BTDCA	TNF ,BTYPE ,BRSC , ISCD ,SECBP ,BRECP , BOLC ,SECBC ,IIMCB , SECDP ,IIMC ,DTDC , MTBC ,BTDCT ,SECC , BTDCM ,BTDCG ,BISC , ONMC ,BTDCI ,IMTBC , SECDC ,ISCB ,SECP , BAFC ,SECRP ,MXNS , BPLAT ,BTCDI ,BTDCC , NS ,BIIMC ,RMTBC , BMTBC ,STDC ,DMTBC , ISC ,OFMCD ,BONMC , STDCI ,SECIC ,BTDCS , SECRC ,OFMCB ,OFMC , AFC ,SECIP ,IIMCI , BTDCA ,IIMCR ,BTDC , RSC ,IIMCD ,BSECC , OLC ,STDCR ,BOFMC	

TABLE 4
LIFE CYCLE COST MODEL CROSS-REFERENCE TABLE
SUBROUTINES BY VARIABLES
(CONTINUED)

	VARIABLES READ	VARIABLES ASSIGNED VALUES	VARIABLES USED	VARIABLES WRITTEN
OTAB3C		DTDC ,BTDCM ,BTDCG , BTDCA	TNF ,BTYPE ,BRSC , ISCD ,BSECP ,BOLC , SECDP ,IIMC ,DTDC , MTRC ,BTDCT ,SECC , BTDCM ,BTDCG ,BISC , ONMC ,IMTRC ,SECDC , SECP ,BAFC ,SECRP , MXNS ,BPLAT ,NS , BIIMC ,RMTRC ,STDC , DMTRC ,ISC ,OFMCD , BOFMC ,STDCI ,SECIC , SECRC ,OFMC ,AFC , SECIP ,IIMCI ,BTDCA , IIMCR ,BTDC ,RSC , IIMCD ,BSECC ,OLC , STDCR ,BOFMC	
OTAB4A		TIAC ,FPLT ,FPM	PIVP ,TNB ,RSCA , TDC ,INO ,NPLT , SECI ,MXNP ,IIMCA , MXNS ,OFMCA ,MXI , NS ,NP ,TIAC , ONMCA ,NITEM ,MTRCI , FPLT ,FAIL ,I , FPM ,ISCA	LRU ,TIAC ,INDUN , I
OTAB4B		FPLT ,FPM	PIVP ,TNB ,INO , NPLT ,MXNP ,MXNS , MXI ,NS ,NP , NITEM ,BS ,DS , FAIL ,I ,FPM	LUP ,FPLT ,BS , DS ,I ,FPM , TOTPQ
OTAB4C			RSCA ,LRU ,INO , OFMCA ,MXI ,ONMCA , FPLT ,I ,FPM	
OTAB5			PIVP ,TNB ,BTYPE , TOTDC ,MSE ,MAL , MXNS ,BPLAT ,NS , SEIND ,SEDV ,NSED , CSF ,SETDC ,L , NSFB	SENDUN ,L

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TABLE 4
LIFE CYCLE COST MODEL CROSS-REFERENCE TABLE
SUBROUTINES BY VARIABLES
(CONTINUED)

	VARIABLES READ	VARIABLES ASSIGNED VALUES	VARIABLES USED	VARIABLES WRITTEN
OTAB6			TNF ,NTRMP ,LRU , INC ,TERMC ,NPLT , MXMP ,TFAC ,MXNS , MXI ,NS ,NP , NITEM ,KFAC ,LE , I ,XFR ,LD , MTEMI ,APFH	NTRMP ,NP ,PNOUN
OTAB7		TMPYT1,TABMHY,TABMP , ADMP ,SAMHY ,SAMP , ABMHYM,TMPYT2,ABMP , ABMHYD	TMPYT1,T2BA ,TABMHY, TNF ,BMF ,XFPR , BCMH ,TABMP ,LRU , DMF ,MRF ,QTYP1 , INC ,NRTS ,COND , MXNS ,RTS ,ADMP , MXI ,NS ,T2DA , MRC ,TR ,TURB , TORD ,FPR ,FAIL , I ,RIP ,ABMHYM, HPT1 ,HPD2 ,NHI , BMH ,QTYP2B,QTYP2D, DMH ,TIME1 ,ABMHYD, SR	TMPYT1,TABMHY,TABMP , ADMP ,NS ,SAMHY , SAMP ,ABMHYM,TMPYT2, ABMP ,ABMHYD
RLAPRT			INC ,DUM ,MXI , I	IND ,MXI ,TIAC
SENSCALC SUBS				
DPIUP		TDPIUP,CPIUP	PIUP ,INB ,FINC , ONMC ,UP ,IND , SECR ,COND ,CPIUP , MXNS ,MXI ,NS , RM ,RMTRC ,FAIL , I ,NHI ,OC , OFNC ,IIVCR ,XOC , STCCR	
DDMF		TDMF	PIUP ,USE ,TNB , MSF ,ISET ,BLR , ERMAB ,DLR ,BAA , FINC ,DAA ,ONMC , INC ,MXL ,ERMBI , ERMD ,MXNS ,MXI , NS ,ISETD ,USED , I ,SEINO ,CSF , L ,ERMAD ,TDMF	

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TABLE 4
LIFE CYCLE COST MODEL CROSS-REFERENCE TABLE
SUBROUTINES BY VARIABLES
(CONTINUED)

VARIABLES READ	VARIABLES ASSIGNED VALUES	VARIABLES USED	VARIABLES WRITTEN
DRM	TDRM ,IDRM	PIUP ,TNB ,FINC , UP ,INO ,COND , MXNS ,MXI ,NS , RM ,FAIL ,I , NHI ,LDRM ,XUC	
DXRM	TDXRM	TDRM ,INO ,MXI , I	
DXUC	TDXUC	TERMH ,FINC ,ISC , RSC	
DUP	TDUP ,IDUP	RSCA ,LDUP ,LC , FINC ,UP ,INO , MXNP ,MXI ,NP , NITEM ,TOTT ,I , ISCA ,XUC	
DFR	IDFR ,TQSA ,TISQN , L ,XITEMQ,TDFR	PIUP ,USE ,TNB , NRM ,MSE ,NFD , RSCA ,ISET ,TQSA , BAA ,FINC ,IRMT , DAA ,UP ,SA , INC ,NFB ,LDFR , COND ,ERMBI ,ERMD , MXNS ,OFMCA ,MXI , TISQ ,NS ,RM , A ,TISQN ,ONMCA , IRMIN ,QSA ,ISETD , USED ,MXLT ,FAIL , I ,NRUC ,ISCA , NHI ,LT ,CSE , YRSQ ,L ,RMI , NUA ,XUC ,MXIRMT	
DXFR	TDXFR	INC ,MXI ,I , TDFR	

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TABLE 4
LIFE CYCLE COST MODEL CROSS-REFERENCE TABLE
SUBROUTINES BY VARIABLES
(CONTINUED)

	VARIABLES READ	VARIABLES ASSIGNED VALUES	VARIABLES USED	VARIABLES WRITTEN
DFPR		TASA ,TDFPR ,IDFPR , L ,XITEMQ	PILP ,USE ,TNB , B ,BTYPE ,BMF , NRM ,NHB ,MSE , OSTC ,RSCA ,ISET , BLF ,XFPR ,BCMH , TDSA ,RU ,BAA , FINC ,IRMT ,HDWRIT, NBC ,UP ,SA , INC ,LDFPR ,NFB , COND ,MXNP ,MXNS , SAT ,CRCT ,MXI , TISQ ,NS ,RM , NP ,A ,CPPC , IRMIN ,NITEM ,TOTT , QSA ,MXLT ,FPR , FAIL ,I ,WT , NRLC ,ISCA ,NHI , LT ,CIMF ,RMH , CSE ,L ,RMI , NJA ,XITEMQ,XUC , BRCT ,MXIRMT	
DXFPR		TDXFPR	INC ,TDFPR ,MXI , I	
DRTS		TDRTS ,IDRTS	TDRTS ,LDRTS ,FINC , INC ,NRTS ,COND , MXI ,I	
DNRTS		IDNRTS,TDNRTS	LDRTS,FINC ,INC , COND ,RTS ,MXI , TDNRTS,I	
DCOND		TDCOND,IDCOND	FINC ,LDCOND,INC , NRTS ,COND ,RTS , MXI ,TDCOND,I	

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TABLE 4
LIFE CYCLE COST MODEL CROSS-REFERENCE TABLE
SUBROUTINES BY VARIABLES
(CONTINUED)

	VARIABLES READ	VARIABLES ASSIGNED VALUES	VARIABLES USED	VARIABLES WRITTEN
DSRU		IDSRU ,TDSRU ,L , XITEMQ	PILP ,USE ,TNB , B ,BTYPE ,BMF , NRM ,NHB ,MSE , DSTC ,RSCA ,ISET , BLR ,XFPR ,BCMH , DLR ,LRU ,DMF , BAA ,TDSRU ,IRMT , NBC ,DAA ,UP , SA ,INQ ,LDSRU , NRTS ,COND ,MXNP , ERHBI ,MXNS ,DFMCA , RTS ,SAT ,CRCT , MXI ,TISQ ,N , RM ,NP ,A , CPFC ,CPPD ,IRMIN , NITEM ,TOTT ,QSA , ISETD ,USED ,MXLT , FPR ,FAIL ,I , WT ,NRUC ,LO , ISCA ,NHI ,LT , CINF ,BMH ,CSE , YRSQ ,DMH ,L , RMI ,OST ,N/A , XUC ,BRCT ,MXIRMT, DRCT	
DXMIL		TDMIL ,TDXMIL	NIA ,TNB ,M , FR ,MILR ,FINC , TDMIL ,IA ,NPLT , MXNP ,MXNS ,NS , NP ,XMIL ,MXM , MIAH	
PENDTABLE SUBS				
DSENS			LDLP ,LDRTS ,LDNRTS, LDCOND,INQ ,LDSRU , LDFPR ,LDFR ,I , LDRM	TDRTS ,TDXFR ,IDNRTS, TDXFPR IDSRU ,IDRM , IDFR ,LRU ,TDSRU , FINC ,UP ,TDPIUP, TDFPR ,NRTS ,COND , CPIUP ,RTS ,RM , TDCOND,TDNRTS,IDRM , IDRTS ,TDXMIL,TFR , TDXUC ,FPR ,TDUP , IDFPR ,TDXRM ,IDUP , TDFR ,IDCOND,TDMF

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TABLE 5
LIFE CYCLE COST MODEL CROSS-REFERENCE TABLE
VARIABLES BY SUBROUTINES

VARIABLE NAME	REAL OR INTEGER	SUBROUTINES WHERE READ	SUBROUTINES WHERE ASSIGNED	SUBROUTINES WHERE USED	SUBROUTINES WHERE WRITTEN
A(I,4,3)	I	READ10		COST10,ZISET ,DSRU , ZSECI ,DFPR ,DFR , CHLC ,ZERMSE	ITB10A,ITB10D,ITB10B, ITB10C
ABMHYD(NS)	R		OTAB7	OTAB7	OTAB7
ABMHYM(NS)	R		OTAB7	OTAB7	OTAB7
ABMP(NS)	R		OTAB7		OTAB7
ACPP	R	READ1		COST10	ITAB1B
ADMP	R		OTAB7	OTAB7	OTAB7
AFC	R		COST3 ,INITAX	COST3 ,OTAB3B,OTAB3A, OTAB3C	
AFMC	R		INITAX		
AKIT(IA,NP)	R	READ5		COST2 ,OTAB2	ITAB5
AMPM(NP,M)	R	READ3		COST3	ITAB3
APFH(NP,M)	R	READ3		OTAB6 ,COST3 ,COST6 , ZFAIL ,ZTFR	ITAB3
B	I			ZNFB ,DSRU ,DFPR , CHLC ,ZERHB	
BAA	R	READ1		ZUSE ,DSRU ,ZSECI , DFPR ,DFR ,CHLC , DDMF	ITAB1A
BAFC(6)	R		COST3 ,INITAX	COST3 ,OTAB3B,OTAB3A, OTAB3C	
BCMH(I)	R	READ9A		COST7 ,OTAB7 ,DSRU , DFPR ,CHLC ,ZERHB	ITAB9A
BDATA	I	READ1		COST10	ITAB1C
BF	R	READ1		FF	ITAB1C
BIIMC(6)	R		INITAX,COST9	OTAB3B,COST9 ,OTAB3C	
BINO(8)	I				
BIRD	R	READ1		RLCOMP	ITAB1C

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TABLE 5
LIFE CYCLE COST MODEL CROSS-REFERENCE TABLE
VARIABLES BY SUBROUTINES
(CONTINUED)

VARIABLE NAME	REAL OR INTEGER	SUBROUTINES WHERE READ	SUBROUTINES WHERE ASSIGNED	SUBROUTINES WHERE USED	SUBROUTINES WHERE WRITTEN
BISC(6)	R		INITAX,COST4	OTAB3B,COST4 ,OTAB3A, OTAB3C	
BLR	R	READ1		COST7 ,DSRU ,COST6 , DFPR ,CHLC ,DDMF	ITAB1A
BMF	R	READ1		COST7 ,OTAB7 ,DSRU , COST6 ,DFPR ,CHLC , ZERHB	ITAB1A
BMH(I)	R	READ9A		COST7 ,OTAB7 ,DSRU , CHLC ,ZERHB	ITAB9A
BMTRC	R		COST11,INITAX	COST11,OTAB3B	
BNJUN(NS,16)	R	READ2			ITAB2
BOFMC(6)	R		COST7 ,INITAX	COST7 ,OTAB3B,OTAB3A, OTAB3C	
BOLC(6)	R		COST3 ,INITAX	COST3 ,OTAB3B,OTAB3A, OTAB3C	
BONMC(6)	R		INITAX,COST8	OTAB3B,COST6 ,OTAB3A, OTAB3C	
BPLAT(NS)	I	READ2		COST7 ,COST3 ,OTAB3B, COST4 ,OTAB5 ,COST6 , COST5 ,COST8 ,COST9 , OTAB3C	ITAB2
BRCT	R	READ1		ZNFB ,DSRU ,DFPR , CHLC	ITAB1B
BRSC(6)	R		INITAX,COST5	OTAB3B,COST5 ,OTAB3A, OTAB3C	
BS(I)	R		INITAX,COST4	COST4 ,OTAB4B	OTAB4B
BSECC(6)	R		INITAX,COST8	OTAB3B,COST8 ,OTAB3C	
BSECP(6)	R		INITAX,COST8	OTAB3B,COST8 ,OTAB3C	
BSP(NS)	I	READ2		ZERHSE	ITAB2
BTCDI	R		INITAX	OTAB3B	
BTDC(NS)	R		COST10	COST10,OTAB3B,OTAB3C	

TABLE 5
LIFE CYCLE COST MODEL CROSS-REFERENCE TABLE
VARIABLES BY SUBROUTINES
(CONTINUED)

VARIABLE NAME	REAL OR INTEGER	SUBROUTINES WHERE READ	SUBROUTINES WHERE ASSIGNED	SUBROUTINES WHERE USED	SUBROUTINES WHERE WRITTEN
BTDCA	R		OTAB3B,OTAB3C	OTAB3B,OTAB3C	
BTDCC	R		OTAB3B	OTAB3B	
BTDCG	R		OTAB3B,OTAB3C	OTAB3B,OTAB3C	
BTDCI	R		OTAB3B	OTAB3B	
BTDCM	R		OTAB3B,OTAB3C	OTAB3B,OTAB3C	
BTDCS	R		OTAB3B	OTAB3B	
BTDCT	R		OTAB3B	OTAB3B,OTAB3C	
BTYPE(NS)	I	READ2		COST10,COST7 ,COST3 , ZNFB ,OTAB3B,DSRU , COST4 ,OTAB5 ,COST6 , DFPR ,COST5 ,CHLC , COST8 ,COST9 ,ZERHB , ZTYPE ,OTAB3C	ITAB2
BXREF(1)	I				
BXTRC	R		INITAX		
CFG(3)	R	READ1		COST3	ITAB1B
CIWF(NS)	R		ZTYPE	DSRU ,DFPR ,CHLC	
COND(I)	R	READ9A	RLCOMP	COST11,COST7 ,ZNFB , OTAB7 ,DRTS ,ERRCK1, DSRU ,ZSECI ,DPIUP , DCOND ,DFPR ,DFR , RLCOMP,COST5 ,CHLC , COST9 ,DNRTS ,ZYRJQ , ZERHB ,DRM ,READ9A	ITAB9A,OSENS
CPD1	R	READ1		COST11	ITAB1C
CPD2	R	READ1		COST11	ITAB1B
CPIUP	R		DPIUP	DPIUP	OSENS
CPPC	R	READ1		COST7 ,DSRU ,DFPR	ITAB1B
CPPD(3)	R	READ1		COST7 ,DSRU ,CHLC	ITAB1B

TABLE 5
LIFE CYCLE COST MODEL CROSS-REFERENCE TABLE
VARIABLES BY SUBROUTINES
(CONTINUED)

VARIABLE NAME	REAL OR INTEGER	SUBROUTINES WHERE READ	SUBROUTINES WHERE ASSIGNED	SUBROUTINES WHERE USED	SUBROUTINES WHERE WRITTEN
CRCT	R	READ1		ZNFB ,DSRU ,DFPR , CHLC	ITAB1B
CSE(L)	R	READ7		DSRU ,DTAB5 ,ZSECI , DFPR ,DFR ,CHLC , COST8 ,DDMF	ITAB7
DAA	R	READ1		ZUSE ,DSRU ,ZSECI , DFR ,CHLC ,DDMF	ITAB1A
DAD	R	READ1		ZNFB ,CHLC	ITAB1B
DATAB(I)	I	READ9B		COST10	ITAB9B
DATAD(I)	I	READ9B		COST10	ITAB9B
DATAS(L)	I	READ7		COST10	ITAB7
DDATA	I	READ1		COST10	ITAB1C
DIXREF(1)	I				
DLR	R	READ1		COST7 ,DSRU ,CHLC , DDMF	ITAB1A
DMF	R	READ1		COST7 ,DTAB7 ,DSRU , CHLC ,ZERHB	ITAB1A
DMH(I)	R	READ9A		COST7 ,DTAB7 ,DSRU , CHLC ,ZERHB	ITAB9A
DMTRC	R		COST11,INITAX	DTAB3B,DTAB3C	
DRAG(NP)	R	READ4		COST3	ITAB4
DRCT(3)	R	READ1		ZNFB ,DSRU ,CHLC	ITAB1B
DS(I)	R		COST4 ,ZTISQ	COST4 ,ZTISQ ,DTAB4B	DTAB4B
DTDC	R		DTAB3B,DTAB3C	DTAB3B,DTAB3C	
DUM(NO DUM)	I				
DUV	I			COST8 ,RLAPRT	
EBIBI I,NS)	R		ZERHB	COST10,ZERHB ,ZERHSE	
ERHA(L)	R		ZSECI	ZSECI	

TABLE 5
LIFE CYCLE COST MODEL CROSS-REFERENCE TABLE
VARIABLES BY SUBROUTINES
(CONTINUED)

VARIABLE NAME	REA OR INTEGER	SUBROUTINES WHERE READ	SUBROUTINES WHERE ASSIGNED	SUBROUTINES WHERE USED	SUBROUTINES WHERE WRITTEN
ERHAB(L,NS)	R		INITAX,ZERHSE	COST10,ZUSE ,ZSECI , CHLC ,DDMF ,ZERHSE	
ERHAD(L)	R		INITAX,ZERHSE	COST10,ZUSE ,ZSECI , CHLC ,DDMF ,ZERHSE	
ERHBI(I,NS)	R		ZERHB	ZISET ,DSRU ,ZSECI , DFR ,DDMF	
ERHD(I)	R		INITAX,ZERHB	COST10,ZISET ,ZSECI , DFR ,DDMF ,ZERHB , ZERHSE	
ERTBI(I,NS)	R		ZERHB	COST10,COST11,ZERHB , ZERHSE	
FAIL(I,NS)	R		INITAX,ZFAIL	OTAB4A,COST7 ,ZNFB , OTAB7 ,DSRU ,COST6 , OTAB4B,ZFAIL ,DPIUP , DFPR ,DFR ,COST5 , CHLC ,COST9 ,ZYRSQ , ZERHB ,ZTFR ,DRM	
FCH(NP)	R	READ3		COST3	ITAB3
FINC	R			DUP ,DRTS ,DPIUP , DCOND ,DFPR ,DFR , DXMIL ,DNRTS ,DXUC , DDMF ,DRM	OSENS ,OTABST
FPLT(I)	R		OTAB4A,INITAX,OTAB4B, ZTFR	OTAB4A,OTAB4C	OTAB4B
FPM(I)	R		OTAB4A,INITAX,OTAB4B, ZTFR	OTAB4A,OTAB4B,OTAB4C, ZTFR	OTAB4B
FPR(I)	R	READ9A		COST7 ,ZNFB ,OTAB7 , DSRU ,COST6 ,DFPR , CHLC ,ZERHB	ITAB9A,OSENS
FR(M,NP)	R	READ4		DXMIL ,COST2 ,OTAB2	ITAB4
FSEDC	R	READ1		OTAB1	ITAB1C
GFE(I)	I	READ8			ITAB8
HOWRIT(I,NP)	R		COST1	DFPR ,COST1 ,CHLC	

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TABLE 5
LIFE CYCLE COST MODEL CROSS-REFERENCE TABLE
VARIABLES BY SUBROUTINES
(CONTINUED)

VARIABLE NAME	REAL OR INTEGER	SUBROUTINES WHERE READ	SUBROUTINES WHERE ASSIGNED	SUBROUTINES WHERE USED	SUBROUTINES WHERE WRITTEN
HD#RT(NP)	R		COST1	COST1	
HPD1	I	READ1		COST11,OTAB7	ITAB1C
HPD2	I	READ1		COST11,OTAB7	ITAB1A
I	I	READ9B,READ10,READ11, READ8 ,READ9A		COST10,ITB10A,ITAB9A, OTAB4A,ZISET ,OTAB6 , COST11,COST7 ,DUP , ZNFB ,ITAB9B,READ9B, ZTOTPQ,OTAB7 ,INITAX, ZLC ,DRTS ,ERRCK1, DSRU ,LCC ,DXFR , COST4 ,ZTISQ ,COST6 , OTAB4B,ZFAIL ,DSEC1 , DPIUP ,ITAB11,READ10, READ11,DCOND ,ITB10D, DFPR ,OSENS ,COST1 , DFR ,RLCOMP,COST5 , CHLC ,OTAB4C,COST9 , RLAPRT,DNRTS ,ITB10B, ITB10C,ITAB8 ,READ8 , DXFPR ,DDMF ,ZTRSQ , ZERHB ,ZPMEQ ,ZTFR , DRM ,ZERHSE,DXRM , READ9A	ITB10A,ITAB9A,OTAB4A, ITAB9B,ERRCK1,OTAB4B, ITAB11,ITB10D,ITB10B, ITB10C,ITAB8
IA	I			DXMIL ,ITAB5 ,COST2 , OTAB2 ,READ5	
IAIND(IA)	I				
IAXREF(1)	I				
IDCOND(I)	I		DCOND		OSENS
IDFPR(I)	I		DFPR		OSENS
IDFR(I)	I		DFR		OSENS
IDNRTS(I)	I		DNRTS		OSENS
IDRM(I)	I		DRM		OSENS
IDRTS(I)	I		DRTS		OSENS
IDSRU(I)	I		DSRU		OSENS

TABLE 5
LIFE CYCLE COST MODEL CROSS-REFERENCE TABLE
VARIABLES BY SUBROUTINES
(CONTINUED)

VARIABLE NAME	REAL OR INTEGER	SUBROUTINES WHERE READ	SUBROUTINES WHERE ASSIGNED	SUBROUTINES WHERE USED	SUBROUTINES WHERE WRITTEN
IDUP(I)	I		DUP		OSENS
IIMC	R		COST9	OTAB3B,OTAB1 ,OTAB3C	
IIMCA(I)	R		INITAX,COST9	OTAB4A,COST9	
IIMCB	R		INITAX,COST9	OTAB3B,COST9	
IIMCD	R		INITAX,COST9	OTAB3B,COST9 ,OTAB3C	
IIMCI	R		INITAX,COST9	OTAB3B,COST9 ,OTAB3C	
IIMCR	R		INITAX,COST9	OTAB3B,DPIUP ,COST9 , OTAB3C	
IMC	R	READ1		COST9	ITAB1B
IMICA(NP)	R		COST2	COST2	
IMTRC	R		COST11,INITAX	COST11,OTAB3B,OTAB3C	
INO(I)	I		READ9B,READ10,PEAD11, READ8 ,READ9A	COST10,IT810A,ITA89A, OTAB4A,ZISET ,OTA86 , COST11,COST7 ,DUP , ZNFB ,ITA89B,ZTOTPQ, OTAB7 ,INITAX,ZLC , DRTS ,ERRCK1,DSRU , DXFR ,COST4 ,ZTISQ , COST6 ,OTAB4B,ZFAIL , ZSECI ,DPIUP ,ITAB11, DCOND ,IT810D,DFPR , OSENS ,COST1 ,DFR , RLCOMP,COST5 ,OTAB4C, COST9 ,RLAPRT,DNRTS , IT810B,IT910C,ITAB8 , DXFPR ,DDMF ,ZYRSQ , ZERHB ,ZPMEQ ,ZTFR , DRM ,ZERHSE,DXRM	RLAPRT
INOUN(I,24)	R	READ8			OTAB4A,ITAB8
INTEG(I)	R	READ8			ITAB8
INTNR(NP)	R	READ4		COST1 ,ITAB4	
INTR(NP)	R	READ4		COST1 ,ITAB4	
IPCF(I)	R	READ9A		COST6	ITAB9A

TABLE 5
LIFE CYCLE COST MODEL CROSS-REFERENCE TABLE
VARIABLES BY SUBROUTINES
(CONTINUED)

VARIABLE NAME	REA OR INTEGER	SUBROUTINES WHERE READ	SUBROUTINES WHERE ASSIGNED	SUBROUTINES WHERE USED	SUBROUTINES WHERE WRITTEN
IRM	I				
IRMIN(I,4)	I	READ10		COST10,ITB10A,ZISET , DSRU ,ZSECI ,ITB10D, DFPR ,DFR ,CHLC , ITB10B,ITB10C,ZERHSE	
IRMINO(IRM)	I				
IRMT	I			COST10,ITB10A,ZISET , DSRU ,ZSECI ,ITB10D, DFPR ,DFR ,CHLC , ITB10B,ITB10C,ZERHSE	
IRMTNO(IRMT)	I				
IRMTXR(1)	I				
IRMXRF(1)	I				
ISC	R		COST4	OTAB3B,OTAB1 ,OTAB3A, DXUC ,OTAB3C	
ISCA(I)	R		COST4	OTAB4A,DUP ,DSRU , COST4 ,DFPR ,DFR , CHLC	
ISCB	R		INITAX,COST4	OTAB3B,COST4 ,OTAB3A	
ISCD	R		INITAX,COST4	OTAB3B,COST4 ,OTAB3A, OTAB3C	
ISET(L,NS)	R		ZISET ,INITAX	ZISET ,DSRU ,ZSECI , DFPR ,DFR ,CHLC , DDMF	
ISETD(L)	R		ZISET ,INITAX	ZISET ,DSRU ,ZSECI , DFR ,CHLC ,DDMF	
IXREF(150)	I				
K(NP)	R	READ4		COST3	ITAB4
KFAC(4)	R	READ1		OTAB6 ,COST6 ,ZFAIL	ITAB1C
K1TEMP	I				
K1TNO(K1TEMP)	I				

TABLE 5
LIFE CYCLE COST MODEL CROSS-REFERENCE TABLE
VARIABLES BY SUBROUTINES
(CONTINUED)

VARIABLE NAME	REAL OR INTEGER	SUBROUTINES WHERE READ	SUBROUTINES WHERE ASSIGNED	SUBROUTINES WHERE USED	SUBROUTINES WHERE WRITTEN
K2TEMP	I				
K2TNO(K2TEMP)	I				
L	I	READ7	COST10,ZISET ,DSRU , ZSECI ,DFPR ,DFR , CHLC ,ZERHSE	COST10,ZISET ,ZUSE , INITAX,DSRU ,OTAB5 , ZSECI ,ITAB7 ,READ7 , DFPR ,DFR ,CHLC , COST8 ,DDMF ,ZERHSE	OTAB5 ,ITAB7
LC(I)	R		ZLC	DUP ,COST4 ,COST1 , COST5	
LDCOND	I			DCOND ,OSENS	
LDERV	I				
LDFPR	I			DFPR ,OSENS	
LDFR	I			OSENS ,DFR	
LDNRTS	I			OSENS ,DNRTS	
LDRM	I			OSENS ,DRM	
LDRTS	I			DRTS ,OSENS	
LDSRU	I			DSRU ,OSENS	
LDUP	I			DUP ,OSENS	
LE(NP)	I	READ3		OTAB6 ,ERRCK1,COST6 , ZFAIL	ERRCK1,ITAB3
LFAC(I)	R	READ8		LCC	ITAB8
LO(NS)	*	READ2		OTAB6 ,COST7 ,COST3 , ZNFB ,DSRU ,COST6 , ZFAIL ,CHLC ,ZTFR	ITAB2
LRU(I)	I	READ8		OTAB6 ,COST7 ,ZNFB , OTAB7 ,ERRCK1,DSRU , COST6 ,DFPR ,COST1 , RLCOMP,COST5 ,CHLC , OTAB4C,COST9 ,ZERHB , ZPMEQ	OTAB4A,OSENS ,ITAB8

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TABLE 5
LIFE CYCLE COST MODEL CROSS-REFERENCE TABLE
VARIABLES BY SUBROUTINES
(CONTINUED)

VARIABLE NAME	REAL OR INTEGER	SUBROUTINES WHERE READ	SUBROUTINES WHERE ASSIGNED	SUBROUTINES WHERE USED	SUBROUTINES WHERE WRITTEN
LT	I			COST10,ZISET ,DSRU , ZSECI ,DFPR ,DFR , CHLC ,ZERHSE	
LTIND(LT)	I				
LTXREF(1)	I				
LUP(I)	R		COST1	COST1	OTAB4B
LXREF(120)	I				
M	I			ERRCK1,ITAB3 ,READ3 , DXMIL ,ITAB5 ,ITAB4 , READ4 ,COST2 ,OTAB2 , READ5	ERRCK1
MIC	R		COST2	OTAB1	
MIFIX(M,NP)	R	READ5		COST2 ,OTAB2	ITAB5
MILR(3)	R	READ1		DXMIL ,COST2 ,OTAB2	ITAB1A
MIMH(IA,M,NP)	R	READ5		DXMIL ,COST2 ,OTAB2	ITAB5
MIND(M)	I				
MMPD(NP,M)	R	READ3		COST3	ITAB3
MMPM(NP)	R	READ3		COST3	ITAB3
MRF	R	READ1		COST7 ,OTAB7	ITAB1A
MRO	R	READ1		COST7 ,OTAB7	ITAB1A
MSE(L)	R	READ7		DSRU ,OTAB5 ,ZSECI , DFPR ,DFR ,CHLC , COST8 ,DDMF	ITAB7
MTBMI(I,4)	R	READ9A		OTAB6 ,ERRCK1,COST6 , ZFAIL	ITAB9A
MTRC	R		COST11,INITAX	COST11,OTAB3B,OTAB1 , OTAB3C	
MTRCI(I)	R		COST11,INITAX	OTAB4A	
MUSE	R	READ1		ZUSE	ITAB1C

TABLE 5
LIFE CYCLE COST MODEL CROSS-REFERENCE TABLE
VARIABLES BY SUBROUTINES
(CONTINUED)

VARIABLE NAME	REAL OR INTEGER	SUBROUTINES WHERE READ	SUBROUTINES WHERE ASSIGNED	SUBROUTINES WHERE USED	SUBROUTINES WHERE WRITTEN
MXI	I		READ9B,READ10,READ11, READ8 ,READ9A	COST10,ITB10A,ITAB9A, OTAB4A,ZISET ,OTAB6 , COST11,COST7 ,DUP , ZNFB ,ITAB9B,ZTOTPQ, OTAB7 ,INITAX,ZLC , DRTS ,ERRCK1,DSRU , DXFR ,COST4 ,ZTISQ , COST6 ,OTAB4B,ZFAIL , ZSECI ,DPIUP ,ITAB11, DCOND ,ITB10D,DFPR , COST1 ,DFR ,RLCOMP, COST5 ,COST8 ,OTAB4C, COST9 ,RLAPRT,DNRTS , ITB10B,ITB10C,ITAB8 , DXFPR ,DDMF ,ZYRSQ , ZERHB ,ZPMEQ ,ZTFR , DRM ,ZERHSE,DXRM	RLAPRT
MXIRM	I				
MXIRMT	I			COST10,ITB10A,ZISET , DSRU ,ZSECI ,ITB10D, DFPR ,DFR ,CHLC , ITB10B,ITB10C,ZERHSE	
MXKT	I				
MXKTE	I				
MXL	I		READ7	COST10,ZUSE ,INITAX, OTAB5 ,ZSECI ,ITAB7 , CHLC ,COST8 ,DDMF	
MXLT	I			COST10,ZISET ,DSRU , ZSECI ,DFPR ,DFR , CHLC ,ZERHSE	
MXM	I			ERRCK1,DXMIL ,COST2 , OTAB2	
MXNP	I		READ6 ,READ3 ,READ4 , READ5	OTAB4A,OTAB6 ,COST11, COST3 ,DUP ,ITAB5 , ERRCK1,DSRU ,COST6 , OTAB4B,ZFAIL ,ITAB3 , DFPR ,COST1 ,DXMIL , ITAB5 ,CHLC ,ITAB4 , ZPMEQ ,COST2 ,ZTFR , OTAB2	

TABLE 5
LIFE CYCLE COST MODEL CROSS-REFERENCE TABLE
VARIABLES BY SUBROUTINES
(CONTINUED)

VARIABLE NAME	REAL OR INTEGER	SUBROUTINES WHERE READ	SUBROUTINES WHERE ASSIGNED	SUBROUTINES WHERE USED	SUBROUTINES WHERE WRITTEN
MXNS	I		READ2	COST10,OTAB4A,ZISET , OTAB6 ,COST11,ZUSE , COST7 ,COST3 ,ZNFB , ITAB2 ,OTAB7 ,INITAX, OTAB3B,DSRU ,COST4 , ZTISQ ,OTAB5 ,COST6 , OTAB4B,ZFAIL ,ZSECI , DPIUP ,DFPR ,COST1 , DFR ,DXMIL ,COST5 , CHLC ,COST8 ,COST9 , DDMF ,ZYRSQ ,ZERHB , ZPMEQ ,COST2 ,ZTFR , ZTYPE ,OTAB3C,DRM , ZERHSE,OTAB2	
MXREF(I)	I				
NAE(NP)	R	READ4		COST3	ITAB4
NBC(NS)	R	READ2		ZNFB ,DSRU ,DFPR , CHLC ,ZERHB	ITAB2
NERRYY	I		ERRCK1	ERRCK1	
NFBII,NS)	R		ZNFB	COST4 ,ZTISQ ,DFPR , DFR ,CHLC ,COST9	
NFD(I)	R		ZNFB ,INITAX	ZNFB ,COST4 ,ZTISQ , DFR ,CHLC	
NHB(NS)	I	READ2		COST7 ,ZNFB ,DSRU , DFPR ,CHLC ,ZERHB	ITAB2
NHI(I)	I	READ8		COST7 ,ZNFB ,OTAB7 , ERRCK1,DSRU ,DPIUP , DFPR ,DFR ,COST5 , CHLC ,COST9 ,ZYRSQ , ZERHB ,DRM	ITAB8
NIA	I			DXMIL ,COST2 ,OTAB2	
NITEM(I,NP)	R	READ11		OTAB4A,OTAB6 ,COST11, DUF ,ERRCK1,DSRU , COST6 ,OTAB4B,ZFAIL , DFPR ,COST1 ,CHLC , ZPMEQ ,ZTFR	ITAB11

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TABLE 5
LIFE CYCLE COST MODEL CROSS-REFERENCE TABLE
VARIABLES BY SUBROUTINES
(CONTINUED)

VARIABLE NAME	REAL OR INTEGER	SUBROUTINES WHERE READ	SUBROUTINES WHERE ASSIGNED	SUBROUTINES WHERE USED	SUBROUTINES WHERE WRITTEN
NJA(I,4)	I	READ10		COST10,ZISET ,ERRCK1, DSRU ,ZSECI ,DFPR , DFR ,CHLC ,ZERHSE	ITB10A,ITB10D,ITB10B, ITB10C
NP	I			OTAB4A,OTAB6 ,COST11, COST3 ,DUP ,ITAB6 , READ6 ,ERRCK1,DSRU , COST6 ,OTAB4B,ZFAIL , ITAB3 ,READ3 ,ITAB11, READ11,DFPR ,COST1 , DXMIL ,ITAB5 ,CHLC , ITAB4 ,READ4 ,ZPMEQ , COST2 ,ZTFR ,OTAB2 , READ5	OTAB6 ,ITAB6 ,ITAB3 , ITAB5 ,ITAB4 ,OTAB2
NPINO(NP)	*				
NPLT(NP,NS)	R	READ6		OTAB4A,OTAB6 ,COST3 , COST6 ,OTAB4B,ZFAIL , COST1 ,DXMIL ,ZPMEQ , COST2 ,ZTFR ,OTAB2	ITAB6
NPXREF(1)	I				
NRM(1)	I	READ10		COST10,ZISET ,DSRU , ZSECI ,READ10,DFPR , DFR ,CHLC ,ZERHSE	
NRMI(NP)	R	READ4		ITAB4 ,COST2	
NRTS(I)	R	READ9A	RLCOMP	COST7 ,ZNFB ,OTAB7 , DRTS ,ERRCK1,DSRU , DCOND ,CHLC ,ZERHB	ITAB9A,OSENS
NRUC	R	READ1		ZTOTPQ,DSRU ,DFPR , DFR ,COST5 ,CHLC	ITAB1C

TABLE 5
LIFE CYCLE COST MODEL CROSS-REFERENCE TABLE
VARIABLES BY SUBROUTINES
(CONTINUED)

VARIABLE NAME	REAL OR INTEGER	SUBROUTINES WHERE READ	SUBROUTINES WHERE ASSIGNED	SUBROUTINES WHERE USED	SUBROUTINES WHERE WRITTEN
NS	I			COST10,OTAB4A,ZISET , OTAB6 ,COST11,ZOSE , COST7 ,COST3 ,ITAB6 , ZNFB ,ITAB2 ,READ2 , OTAB7 ,INITAX,READ6 , OTAB3B,DSRU ,COST4 , ZTISQ ,OTAB5 ,COST6 , OTAB4B,ZFAIL ,ZSECI , DPIUP ,DFPR ,COST1 , DFR ,DXMIL ,COST5 , CHLC ,COST8 ,COST9 , DDMF ,ZYRSQ ,ZERHB , ZPMEQ ,COST2 ,ZTFR , ZTYPE ,OTAB3C,DRM , ZERHSE,OTAB2	ITAB2 ,OTAB7
NSEB(L,NS)	R		ZSECI	COST10,OTAB5 ,ZSECI , CHLC ,COST8	
NSED(L)	R		ZSECI	COST10,OTAB5 ,ZSECI , CHLC ,COST8	
NSINO(NS)	I				
NSXREF(1)	I				
NTRMP(NP)	R	READ4		OTAB6	OTAB6 ,ITAB4
OC	R		COST3	DPIUP ,OTAB1	
OFMC	R		COST7	COST10,OTAB3B,DPIUP , OTAB1 ,OTAB3A,OTAB3C	
OFMCA(I)	R		COST7 ,INITAX	COST10,OTAB4A,COST7 , DSRU ,DFR ,OTAB4C	
OFMCB	R		COST7 ,INITAX	COST7 ,OTAB3B,OTAB3A	
OFMCD	R		COST7 ,INITAX	COST7 ,OTAB3B,OTAB3A, OTAB3C	
OLC	R		COST3	COST3 ,OTAB3B,OTAB3A, OTAB3C	
OLCP	R		COST3 ,INITAX	COST3	
OLCT	R		COST3 ,INITAX	COST3	

TABLE 5
LIFE CYCLE COST MODEL CROSS-REFERENCE TABLE
VARIABLES BY SUBROUTINES
(CONTINUED)

VARIABLE NAME	REAL OR INTEGER	SUBROUTINES WHERE READ	SUBROUTINES WHERE ASSIGNED	SUBROUTINES WHERE USED	SUBROUTINES WHERE WRITTEN
ONMC	R		INITAX,COST6	COST10,OTAB3B,COST6 , DPIUP ,OTAB1 ,OTAB3A, DDMF ,OTAB3C	
ONMCA(I)	R		INITAX,COST6	COST10,OTAB4A,COST6 , DFR ,OTAB4C	
OST(3)	R	READ1		ZNFB ,DSRU ,CHLC	ITAB1B
OSTC	R	READ1		ZNFB ,DSRU ,DFPR	ITAB1B
PA(I)	R	READ8		CHLC ,COST9	ITAB8
PAL1	R	READ1		CCST11	ITAB1A
PAL2B	R	READ1		COST11	ITAB1A
PAL2D	R	READ1		COST11	ITAB1A
PBDV(L)	R		ZSECI	ZSECI	
PDDV(L)	R		ZSECI	ZSECI	
PDIV(NP)	R	READ4		COST2	ITAB4
PIUP	R	READ1		COST10,OTAB4A,COST11, COST7 ,COST3 ,DSRU , OTAB5 ,COST6 ,OTAB4B, ZSECI ,DPIUP ,DFPR , DFR ,COST5 ,CHLC , COST8 ,COST9 ,DDMF , ZTFR ,DRM	ITAB1C,OTABST
PMEQ(I)	R		ZPMEQ	ZTOTPQ	
PMLR	R	READ1		COST3	ITAB1A
PNOUN(NP,12)	R	READ3			OTAB6 ,ITAB3 ,OTAB2
PPSE(I,L)	R		COST10	COST10	
PRODC	R		COST1		
PTNUM(I,12)	R	READ8			ITAB8
QSA(I,4,3)	R	READ10		COST10,ZISET ,DSRU , ZSECI ,DFPR ,DFR , CHLC ,ZERHSE	ITB10A,ITB10D,ITB10B, ITB10C

TABLE 5
LIFE CYCLE COST MODEL CROSS-REFERENCE TABLE
VARIABLES BY SUBROUTINES
(CONTINUED)

VARIABLE NAME	REAL OR INTEGER	SUBROUTINES WHERE READ	SUBROUTINES WHERE ASSIGNED	SUBROUTINES WHERE USED	SUBROUTINES WHERE WRITTEN
QTYP1	I	READ1		COST11,OTAB7	ITAB1C
QTYP2B	I	READ1		COST11,OTAB7	ITAB1C
QTYP2D	I	READ1		COST11,OTAB7	ITAB1C
R	I	READ1		RLCOMP	ITAB1C,OTABST
RCPP	R	READ1		COST10	ITAB1B
RIP(I)	R	READ9A		COST7 ,OTAB7 ,COST6 , ZFAIL	ITAB9A
RL(I)	I	READ9A	RLCOMP	RLCOMP	ITAB9A
RM(I)	R	READ8		DSRU ,DP1UP ,DFPR , DFR ,COST5 ,CHLC , DRM	OSENS ,ITAB8
RMC	R	READ1		COST9	ITAB1B
RMH(I)	R	READ9A		COST6 ,DFPR	ITAB9A
RMI(I,NS)	I		ZERHSE	COST10,ZISET ,DSRU , ZSECI ,DFPR ,DFR , CHLC ,ZERHSE	
RMICA(NP)	R		COST2	COST2	
RMTRC	R		COST11	OTAB3B,DP1UP ,OTAB3C	
RSC	R		INITAX,COST5	OTAB3B,COST5 ,OTAB1 , OTAB3A,DXUC ,OTAB3C	
RSCA(I)	R		COST5	OTAB4A,DUP ,DSRU , DFPR ,DFR ,COST5 , CHLC ,OTAB4C	
RTS(I)	R	READ9A	RLCOMP	COST7 ,ZERHB ,OTAB7 , ERRCK1,DSRU ,DCOND , RLCOMP,CHLC ,COST9 , DNRTS ,ZERHB	ITAB9A,OSENS
SA	R	READ1		DSRU ,DFPR ,DFR , CHLC ,COST9	ITAB1B
SAMHY	R		OTAB7		OTAB7

TABLE 5
LIFE CYCLE COST MODEL CROSS-REFERENCE TABLE
VARIABLES BY SUBROUTINES
(CONTINUED)

VARIABLE NAME	REAL OR INTEGER	SUBROUTINES WHERE READ	SUBROUTINES WHERE ASSIGNED	SUBROUTINES WHERE USED	SUBROUTINES WHERE WRITTEN
SAMP	R		OTAB7		OTAB7
SAT(NS)	R		ZTYPE	DSRU ,DFPR ,CHLC , COST9	
SECB(L)	R		ZSECI	ZSECI	
SECBC	R		INITAX,COST8	OTAB3B	
SECBP	R		INITAX,COST8	OTAB3B	
SECC	R		INITAX,COST8	OTAB3B,OTAB3C	
SECD(L)	R		ZSECI	ZSECI	
SECDC	R		INITAX,COST8	OTAB3B,COST8 ,OTAB3C	
SECDP	R		INITAX,COST8	OTAB3B,COST8 ,OTAB3C	
SECI(I)	R		ZSECI	OTAB4A,ZSECI	
SECIC	R		INITAX,COST8	OTAB3B,COST8 ,OTAB3C	
SECII	R		INITAX,COST8	COST8	
SECIP	R		INITAX,COST8	OTAB3B,COST8 ,OTAB3C	
SECP	R		INITAX,COST8	OTAB3B,OTAB3C	
SECR	R		INITAX,COST8	DPIUP ,COST8	
SECRC	R		INITAX,COST8	OTAB3B,COST8 ,OTAB3C	
SECRP	R		INITAX,COST8	OTAB3B,COST8 ,OTAB3C	
SEDC	R		INITAX,COST8	COST8 ,OTAB1	
SEDEV(L)	R	READ7		ZSECI	ITAB7
SEDV(L)	R		ZSECI	OTAB5 ,ZSECI ,COST8	
SEINO(L)	I		READ7	COST10,ZUSE ,INITAX, OTAB5 ,ZSECI ,ITAB7 , CHLC ,COST8 ,UDMF	
SENOUN(L,20)	R	READ7			OTAB5 ,ITAB7
SENUM(L,12)	R	READ7			ITAB7

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TABLE 5
LIFE CYCLE COST MODEL CROSS-REFERENCE TABLE
VARIABLES BY SUBROUTINES
(CONTINUED)

VARIABLE NAME	REAL OR INTEGER	SUBROUTINES WHERE READ	SUBROUTINES WHERE ASSIGNED	SUBROUTINES WHERE USED	SUBROUTINES WHERE WRITTEN
SEPC	R		INITAX,COST8	COST8 ,OTAB1	
SETDC(L)	R		COST10,INITAX	OTAB5	
SETYPE(L)	I	READ7		ZUSE ,ZSECI ,COST8	ITAB7
SPC1	I	READ1		COST11	ITAB1C
SPC2	I	READ1		COST11	ITAB1C
SR	R	READ1		COST7 ,OTAB7	ITAB1A
STDC	R		COST10,INITAX	COST10,OTAB3B,OTAB1 , OTAB3C	
STDCI	R		COST10,INITAX	COST10,OTAB3B,OTAB3C	
STDCR	R		COST10,INITAX	OTAB3B,DPIUP ,OTAB3C	
TABMHY(NS)	R		OTAB7	OTAB7	OTAB7
TABMP(NS)	R		OTAB7	OTAB7	OTAB7
TCFB	R		COST7	COST7	
TCFD	R		COST7	COST7	
TDC(I)	R		COST10,INITAX	OTAB4A	
TDCOND(I)	R		DCOND	DCOND	OSENS
TDFPR(I)	R		DFPR	DXFPR	OSENS
TDFR(I)	R		DFR	DXFR	OSENS
TDMF	R		DDMF	DDMF	OSENS
TDMIL	R		DXMIL	DXMIL	
TDNRTS(I)	R		DNRTS	DNRTS	OSENS
TDPIUP	R		DPIUP		OSENS
TDRM(I)	R		DRM	DXRM	OSENS
TDRTS(I)	R		DRTS	DRTS	OSENS
TDSRU(I)	R		DSRU	DSRU	OSENS

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TABLE 5
LIFE CYCLE COST MODEL CROSS-REFERENCE TABLE
VARIABLES BY SUBROUTINES
(CONTINUED)

VARIABLE NAME	REAL OR INTEGER	SUBROUTINES WHERE READ	SUBROUTINES WHERE ASSIGNED	SUBROUTINES WHERE USED	SUBROUTINES WHERE WRITTEN
TDUP(I)	R		DUP		OSENS
TDXFPR	R		DXFPR		OSENS
TDXFR	R		DXFR		OSENS
TDXMIL	R		DXMIL		OSENS
TDXRM	R		DXRM		OSENS
TDXUC	R		DXUC		OSENS
TEFM	R	READ1		COST11	ITAB1C
TERMB(L)	R		INITAX,ZSECI	ZSECI	
TERMD(L)	R		INITAX,ZSECI	ZSECI	
TERMC(NP)	R		COST1	OTAB6	
TERMM	R		INITAX,COST1	COST1 ,OTAB1 ,DXUC	
TERMI	R		INITAX,COST1	COST1 ,OTAB1	
TFAC(NP)	R	READ3		OTAB6 ,COST6 ,ZFAIL , ZTFR	ITAB3
TFR(I)	R		ZTFR		OSENS
THRS(NP)	R	READ3		COST3	ITAB3
TIAC(I)	R		OTAB4A,INITAX	OTAB4A	OTAB4A,RLAPRT
TIME1(I)	I	READ9B		COST11,OTAB7	ITAB9B
TISQ(I)	R		ZTISQ	ZTOTPQ,DSRU ,COST4 , ZTISQ ,DFPR ,DFR	
TISQN(I)	R		DFR	DFR	
TMIL	R		OTAB2	OTAB2	OTAB2
TMPYT1	R		OTAB7	OTAB7	OTAB7
TMPYT2	R		OTAB7		OTAB7

TABLE 5
LIFE CYCLE COST MODEL CROSS-REFERENCE TABLE
VARIABLES BY SUBROUTINES
(CONTINUED)

VARIABLE NAME	REA OR INTEGER	SUBROUTINES WHERE READ	SUBROUTINES WHERE ASSIGNED	SUBROUTINES WHERE USED	SUBROUTINES WHERE WRITTEN
TNB(NS)	R	READ2		COST10,OTAB4A,OTAB6 , COST7 ,COST3 ,ZNFB , OTAB7 ,OTAB3B,OSRU , COST4 ,ZTISQ ,OTAB5 , COST6 ,OTAB4B,ZSECI , DPIUP ,DFPR ,COST1 , DFR ,DXMIL ,COST5 , CHLC ,COST8 ,COST9 , DDMF ,ZYRSQ ,ZERHB , ZPMEQ ,COST2 ,ZTFR , OTAB3C,DRM ,OTAB2	ITAB2
TNLR	R	READ1		COST3	ITAB1A
TNSE(L)	R		COST10	COST10	
TORB	R	READ1		COST11,OTAB7	ITAB1A
TORD	R	READ1		COST11,OTAB7	ITAB1A
TOTPQ(I)	R		ZTOTPQ	LCC	OTAB4B
TOTT(NP)	R		COST1	DUP ,OSRU ,DFPR , COST1 ,CHLC	
TQSA	R		DFPR ,DFR	DFPR ,DFR	
TR	R	READ1		COST7 ,OTAB7	ITAB1A
TRAV9	R	READ1		COST11	ITAB1A
TRAV1D	R	READ1		COST11	ITAB1A
TSEC	R		COST8	OTAB1	
TUCTDC	R		INITAX,ZSECI	OTAB5 ,ZSECI ,COST8	
TYP2TF	R	READ1		COST11	ITAB1C
T2BA	R		COST11	COST11,OTAB7	
T2DA	R		COST11	COST11,OTAB7	
UCPP	R	READ1		COST10	ITAB1B
UCTDC(I)	R		ZSECI	ZSECI	
UCTDEV(I)	R	READ9B		ZSECI	ITAB9B

TABLE 5
LIFE CYCLE COST MODEL CROSS-REFERENCE TABLE
VARIABLES BY SUBROUTINES
(CONTINUED)

VARIABLE NAME	REAL OR INTEGER	SUBROUTINES WHERE READ	SUBROUTINES WHERE ASSIGNED	SUBROUTINES WHERE USED	SUBROUTINES WHERE WRITTEN
UP(I)	R	READ8		DUP ,DSRU ,COST4 , DPIUP ,DFPR ,COST1 , DFR ,COST5 ,CHLC , DRM	OSENS ,ITAB8
USE(L,NS)	R		ZUSE ,INITAX	DSRU ,DFPR ,DFR , CHLC ,DDMF	
USED(L)	R		ZUSE ,INITAX	DSRU ,DFR ,CHLC , DDMF	
WEAR(I)	R		READ9A	RLCOMP	
WT(I)	R	READ8		COST7 ,DSRU ,DFPR , CHLC	ITAB8
XFPR	R	READ1		COST7 ,ZNFB ,OTAB7 , DSRU ,COST6 ,DFPR , CHLC ,ZERHB	ITAB1C,OTABST
XFR	R	READ1		OTAB6 ,COST6 ,ZFAIL	ITAB1C,OTABST
XITEMQ(I)	R		INITAX,DSRU ,DFPR , DFR ,CHLC	LCC ,DFPR	
XK1TNO(1)	I				
XK2TNO(1)	I				
XMIL	R	READ1		DXMIL ,COST2 ,OTAB2	ITAB1C,OTABST
XUC	R	READ1		DUP ,DSRU ,COST4 , DPIUP ,DFPR ,COST1 , DFR ,COST5 ,CHLC , DRM	ITAB1C,OTABST
YRSQ(I)	R		ZYRSQ	ZTOTPQ,DSRU ,DFR	

APPENDIX F

RLA PROGRAM FORTRAN SOURCE CODE

```
C*************************************************************************
C                                                          800620 115703351
C*************************************************************************
      COMMON /EXITXX/ EXITXX
      INTEGER EXITXX
      COMMON /ITERXX/ ITERXX
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      COMMON /RERDXX/ RERDXX
      INTEGER RERDXX
      COMMON /NERRXX/ NERRXX
      COMMON /NERRYY/ NERRYY
      COMMON /REDOXX/ REDOXX
      INTEGER REDOXX
C
    1 FORMAT(1H1//22H PROGRAM STOPS DUE TO ,I4,
     +  16H ERRORS ON INPUT)
C
C
C
C
C*************************************************************************
C*  INITIALIZE SENSITIVITY PRINT PARAMETERS                              *
C*************************************************************************
C
      CALL INITAL
      NERRXX=0
      REWIND 11
      REWIND 12
      REWIND 13
      CALL READ1
      CALL READ2
      CALL READ3
      NERRYY=NERRXX
    2 CONTINUE
C
C
C
C*************************************************************************
C*************************************************************************
C*  PRINT THE INPUT DATA VALUES.                                         *
```


PRECEDING PAGE BLANK-NOT FILMED

```
C*****************************************************************************
C
      CALL ITAB1
      CALL ITAB2
      CALL ZTRAN
C
C
C
C*****************************************************************************
C*  STOP IF ANY ERRORS WERE FOUND ON INPUT.                                  *
C*****************************************************************************
C
      NERRXX=NERRYY
      IF(NERRXX.EQ.0) GO TO 4
           WRITE(7,1)NERRXX
        STOP
    4 CONTINUE
C
C
C
C*****************************************************************************
C*  LCC CALCULATIONS                                                         *
C*****************************************************************************
C
      CALL ZISINO
      CALL INITAX
      CALL STEP0
      CALL STEP1
      CALL STEP2
      CALL STEP3
      CALL STEP4
C
C
C
C*****************************************************************************
C
C*****************************************************************************
C*  PRINT OUTPUT TABLES AT TERMINAL AND/OR OFFLINE PRINTER                   *
C*****************************************************************************
C
      CALL OUT9A
      CALL OTAB1
C
C
C
C*****************************************************************************
```

```
  888 CONTINUE
C
  999 STOP
C
      END
```

```
      SUBROUTINE READ1
C                                                              800620 115546520
C*****************************************************************************
C*  READS THE LRU/SRU CROSS REFERENCE DATA                                   *
C*  FILE FROM CHANNEL 11                                                     *
C*****************************************************************************
C
      COMMON /IL/ IL
      COMMON /ILINO/ ILINO(120)
      COMMON /ISRU/ ISRU(120,30)
      COMMON /MXIL/ MXIL
      COMMON /NDS/ NDS(120)
      COMMON /QPA/ QPA(120,30)
      COMMON /NERRXX/ NERRXX
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      DATA XXSTAR/1H*/
    1 FORMAT(A1,I3,I2,14(I3,F2.0))
    2 FORMAT(A1,5X,14(I3,F2.0))
    3 FORMAT(A1)
    4 FORMAT(/49H UNIT 11 ERROR:  END OF FILE CARD NOT FOUND AFTER/
     +17X,37HMAXIMUM NUMBER OF CARDS WERE READ IN.)
C
C
      MXIL=0
      DO 220 IXXX1=1,120
        READ(11, 1) XXCOL1,IL,NDS(IL),(ISRU(IL,K1),QPA(IL,K1),K1=1,14)
        IF(XXCOL1.EQ.XXSTAR) RETURN
        MXIL=IXXX1
        ILINO(IXXX1)=IL
        J2=14
        J3=14
C
  211    CONTINUE
         IF(.NOT.(NDS(IL).GT.J3.AND.NDS(IL).LE.30)) GO TO 210
           J2=J3+1
           J3=J2+13
           READ(11, 2) XXCOL,(ISRU(IL,K1),QPA(IL,K1),K1=J2,J3)
           IF(XXCOL.NE.XXSTAR) GO TO 211
  210 CONTINUE
  220 CONTINUE
C
```

```
      READ(11, 3) XXCOL1
      IF(XXCOL1.EQ.XXSTAR) RETURN
      NERRXX=NERRXX+1
        WRITE(7,4)
C
      RETURN
      END
```

```
      SUBROUTINE READ2
C                                                              800620 115551971
C*****************************************************************************
C*  READS THE ITEM MAINTENANCE DATA FILE                                     *
C*  FROM CHANNEL 19                                                          *
C*****************************************************************************
C
      COMMON /BCMH/ BCMH(150)
      COMMON /BMH/ BMH(150)
      COMMON /COND/ COND(150)
      COMMON /DMH/ DMH(150)
      COMMON /FPR/ FPR(150)
      COMMON /I/ I
      COMMON /INO/ INO(150)
      COMMON /IPCF/ IPCF(150)
      REAL IPCF
      COMMON /LRU/ LRU(150)
      COMMON /MTBMI/ MTBMI(150,4)
      REAL MTBMI
      COMMON /MXI/ MXI
      COMMON /NRTS/ NRTS(150)
      REAL NRTS
      COMMON /RIP/ RIP(150)
      COMMON /RL/ RL(150)
      INTEGER RL
      COMMON /RMH/ RMH(150)
      COMMON /RTS/ RTS(150)
      COMMON /NERRXX/ NERRXX
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      DATA XXSTAR/1H*/
    1 FORMAT(A1,I3,4F8.0,F4.3,F3.2,F5.2,3F4.3,4F4.2,I1)
    2 FORMAT(A1)
    3 FORMAT(/49H UNIT 13 ERROR:  END OF FILE CARD NOT FOUND AFTER/
     +17X,37HMAXIMUM NUMBER OF CARDS WERE READ IN.)
C
C
      MXI=0
      DO 210 IXXX1=1,150
        LRU(I)=-1
        READ(13, 1) XXCOL1,I,(MTBMI(I,K1),K1=1,4),FPR(I),RIP(I),IPCF(I),
     +    RTS(I),NRTS(I),COND(I),RMH(I),BCMH(I),BMH(I),DMH(I),RL(I)
        IF(XXCOL1.EQ.XXSTAR) RETURN
        MXI=IXXX1
        INO(IXXX1)=I
  210 CONTINUE
C
```

```
      READ(13, 2) XXCOL1
      IF(XXCOL1.EQ.XXSTAR) RETURN
      NERRXX=NERRXX+1
        WRITE(7,3)
C
      RETURN
      END
```

```
      SUBROUTINE READ3
C                                                              800620 115554898
C*****************************************************************************
C*  READS THE TIAC(I,6) FILE                                                 *
C*  FROM CHANNEL 12                                                          *
C*****************************************************************************
C
      COMMON /DUM/ DUM
      INTEGER DUM
      COMMON /DUMM/ DUMM
      INTEGER DUMM
      COMMON /I/ I
      COMMON /INO/ INO(150)
      COMMON /MXD/ MXD
      COMMON /MXDD/ MXDD
      COMMON /MXI/ MXI
      COMMON /TIAC/ TIAC(150,6)
      INTEGER FINISH
      INTEGER START
      INTEGER XI
    1 FORMAT(I3)
    2 FORMAT(6(I3,1X,F8.1,1X))
    3 FORMAT(A1)
C
C
      MXDD=0
      DO 230 DUMM=1,6
        READ(12, 1) XI
        MXDD=DUMM
        MXD=0
        DO 220 DUM=1,XI,6
          START=DUM
          FINISH=DUM+5
          IF(.NOT.(FINISH.GT.XI)) GO TO 210
            FINISH=XI
  210     CONTINUE
          READ(12, 2) (INO(K1),TIAC(INO(K1),DUMM),K1=START,FINISH)
  220   CONTINUE
        READ(12, 3) XXSIGN
        MXDD=DUMM
  230 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE ITAB1
C                                                          800620 115556296
C*****************************************************************************
C*  LRU/SRU CROSS REFERENCE DATA                                             *
C*****************************************************************************
C
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      COMMON /FULLXX/ FULLXX
      INTEGER FULLXX
      COMMON /IL/ IL
      COMMON /ILINO/ ILINO(120)
      COMMON /ISRU/ ISRU(120,30)
      COMMON /MXIL/ MXIL
      COMMON /NDS/ NDS(120)
      COMMON /QPA/ QPA(120,30)
      COMMON /XXCOL1/ XXCOL1
      DATA XXSTAR/1H*/
    1 FORMAT(1H1/30X,59HINPUT TABLE 1: LRU/SRU CROSS REFERENCE DATA  (FR
     +OM FILE 8B))
    2 FORMAT(59X,11H(CONTINUED)//)
    3 FORMAT(//9X,4H#SRU,4X,12HSRU    SRU  ,3X,12HSRU    SRU  ,3X,12HSRU
     +    SRU  ,3X,12HSRU    SRU  ,3X,12HSRU    SRU  ,3X,12HSRU    SRU
     +,3X,12HSRU    SRU  /1X,3HLRU,5X,5HTYPES,3X,12HINDEX  QUAN-,3X,12HI
     +NDEX  QUAN-,3X,12HINDEX  QUAN-,3X,12HINDEX  QUAN-,3X,12HINDEX  QUA
     +N-,3X,12HINDEX  QUAN-,3X,12HINDEX  QUAN-/1X,5HINDEX,3X,6HIN LRU,2X
     +,12HNO.    TITY ,3X,12HNO.    TITY ,3X,12HNO.    TITY ,3X,12HNO.
     +  TITY ,3X,12HNO.    TITY ,3X,12HNO.    TITY ,3X,11HNO.    TITY/1X
     +,4H(IL),4X,5H(NDS),3X,12H(ISRU) (QPA),3X,12H(ISRU) (QPA),3X,12H(IS
     +RU) (QPA),3X,12H(ISRU) (QPA),3X,12H(ISRU) (QPA),3X,12H(ISRU) (QPA)
     +,3X,12H(ISRU) (QPA)//)
    4 FORMAT(2X,I3,5X,I3,5X,I3,3X,F4.0,5X,I3,3X,F4.0,5X,I3,3X,F4.0,5X,I3
     +,3X,F4.0,5X,I3,3X,F4.0,5X,I3,3X,F4.0,5X,I3,3X,F4.0/18X,I3,3X,F4.0,
     +5X,I3,3X,F4.0,5X,I3,3X,F4.0,5X,I3,3X,F4.0,5X,I3,3X,F4.0,5X,I3,3X,F
     +4.0,5X,I3,3X,F4.0)
    5 FORMAT(18X,I3,3X,F4.0,5X,I3,3X,F4.0,5X,I3,3X,F4.0,5X,I3
     +,3X,F4.0,5X,I3,3X,F4.0,5X,I3,3X,F4.0,5X,I3,3X,F4.0/18X,I3,3X,F4.0,
     +5X,I3,3X,F4.0,5X,I3,3X,F4.0,5X,I3,3X,F4.0,5X,I3,3X,F4.0,5X,I3,3X,F
     +4.0,5X,I3,3X,F4.0)
C
C
C
C
      IPAGE=40
      IFLAG=1
      DO 240 IXXX1=1,MXIL
        IL=ILINO(IXXX1)
```

```
      IF(.NOT.(IPAGE.EQ.40)) GO TO 220
        WRITE( 7, 1)
        IPAGE=1
        IF(.NOT.(IFLAG.NE.1)) GO TO 210
          WRITE( 7, 2)
  210     CONTINUE
        WRITE( 7, 3)
  220   CONTINUE
      WRITE( 7, 4) IL,NDS(IL),(ISRU(IL,K1),QPA(IL,K1),K1=1,14)
      J2=14
      J3=14
C
  241 CONTINUE
      IF(.NOT.(NDS(IL).GT.J3.AND.NDS(IL).LE.30)) GO TO 230
        J2=J3+1
        J3=J2+13
        WRITE( 7, 5) (ISRU(IL,K1),QPA(IL,K1),K1=J2,J3)
         IF(XXCOL.NE.XXSTAR) GO TO 241
  230   CONTINUE
      IFLAG=0
      IPAGE=IPAGE+1
  240 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE ITAB2
C                                                              800620 115602424
C*****************************************************************************
C*  PRINTS ITEM REPAIR-LEVEL-DEVELOPMENT COSTS                               *
C*****************************************************************************
C
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      COMMON /FULLXX/ FULLXX
      INTEGER FULLXX
      COMMON /I/ I
      COMMON /INO/ INO(150)
      COMMON /MXI/ MXI
      COMMON /TIAC/ TIAC(150,6)
    1 FORMAT(1H1/38X,50HINPUT TABLE 2: TOTAL ITEM SUPPORT COST - TIAC(I,
     +R)/48X,31H(COSTS IN THOUSANDS OF DOLLARS))
    2 FORMAT(58X,11H(CONTINUED)//)
    3 FORMAT(//49X,31HGLOBAL MAINTENANCE STRATEGY - R/26X,4HITEM,7X,68H-
     +----------------------------------------------------------------
     +-/26X,5HINDEX,9X,1H1,11X,1H2,11X,1H3,11X,1H4,11X,1H5,11X,1H6//)
    4 FORMAT(27X,I3,7X,6(F8.1,4X))
C
C
C
C
      IPAGE=40
      IFLAG=1
      DO 230 IXXX1=1,MXI
        I=INO(IXXX1)
        IF(.NOT.(IPAGE.EQ.40)) GO TO 220
          WRITE( 7, 1)
          IPAGE=1
          IF(.NOT.(IFLAG.NE.1)) GO TO 210
            WRITE( 7, 2)
  210     CONTINUE
          WRITE( 7, 3)
  220   CONTINUE
        WRITE( 7, 4) I,(TIAC(I,K1),K1=1,6)
        IFLAG=0
        IPAGE=IPAGE+1
  230 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE ZTRAN
C                                                          800620 115614729
C***********************************************************************
C*  CALCULATES NTL(IS),TQPA, AND LRU(I)                                *
C***********************************************************************
C
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      COMMON /IL/ IL
      COMMON /ILINO/ ILINO(120)
      COMMON /IS/ IS
      COMMON /ISRU/ ISRU(120,30)
      COMMON /ISXREF/ ISXREF(150)
      COMMON /LRU/ LRU(150)
      COMMON /MXIL/ MXIL
      COMMON /MXIS/ MXIS
      COMMON /NDL/ NDL(150)
      COMMON /NDS/ NDS(120)
      COMMON /NERRYY/ NERRYY
      COMMON /NTL/ NTL(150)
      COMMON /QPA/ QPA(120,30)
      COMMON /TQPA/ TQPA(150,120)
      INTEGER TQPA
    1 FORMAT(//1X,17H*** ERROR - ITEM ,I3,39H IS LISTED AS BOTH AN LRU A
     +ND AN SRU IN,16H THE QPA MATRIX.)
    2 FORMAT(//1X,17H*** ERROR - ITEM ,I3,39H IS LISTED AS BOTH AN LRU A
     +ND AN SRU IN,16H THE QPA MATRIX.)
C
C
C
      DO 270 IXXX1=1,MXIL
        IL=ILINO(IXXX1)
        IF(.NOT.(LRU(IL).EQ.0)) GO TO 210
        WRITE(7,1)IL
          NERRYY=NERRYY+1
  210   CONTINUE
        IF(.NOT.(LRU(IL).EQ.-1)) GO TO 220
          LRU(IL)=1
  220   CONTINUE
C.......THESE 4 STMTS IMPLEMENT THE POINTER MATRIX
        NXXX1=NDS(IL)
        IF(NXXX1.EQ.0) GO TO 260
        DO 250 JXXX1=1,NXXX1
          IS=ISRU(IL,JXXX1)
          IF(.NOT.(LRU(IS).EQ.1)) GO TO 230
          WRITE(7,2)IS
            NERRYY=NERRYY+1
```

```
  230      CONTINUE
           IF(.NOT.(LRU(IS).EQ.-1)) GO TO 240
             LRU(IS)=0
  240      CONTINUE
           NTL(IS)=NTL(IS)+QPA(IL,JXXX1)
           NDL(IS)=NDL(IS)+1
           TQPA(IS,NDL(IS))=IL
  250    CONTINUE
  260    CONTINUE
  270 CONTINUE
C
       RETURN
       END
```

```
      SUBROUTINE ZISINO
C                                                          800620 115622448
C*************************************************************************
C*  CALCULATES ISINO(150)                                                *
C*************************************************************************
C
      COMMON /I/ I
      COMMON /INO/ INO(150)
      COMMON /ISINO/ ISINO(150)
      COMMON /LRU/ LRU(150)
      COMMON /MXI/ MXI
      COMMON /MXIS/ MXIS
C
C
      MXIS=0
      DO 220 IXXX1=1,MXI
        I=INO(IXXX1)
        IF(.NOT.(LRU(I).EQ.0)) GO TO 210
          MXIS=MXIS+1
          ISINO(MXIS)=I
  210   CONTINUE
  220 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE INITAX
C                                                          800620 115622777
C*************************************************************************
C*  INITIALIZES                                                          *
C*************************************************************************
C
      COMMON /AIAC/ AIAC(150,3)
      COMMON /I/ I
      COMMON /IL/ IL
      COMMON /ILINO/ ILINO(120)
      COMMON /INO/ INO(150)
      COMMON /IS/ IS
      COMMON /ISINO/ ISINO(150)
      COMMON /J/ J
      COMMON /LCRL/ LCRL(150)
      COMMON /LCRLS/ LCRLS(120,150)
      COMMON /LCRS/ LCRS(150,3)
      COMMON /MXI/ MXI
      COMMON /MXIL/ MXIL
      COMMON /MXIS/ MXIS
      COMMON /MXJ/ MXJ
      COMMON /TLAC/ TLAC(120)
      COMMON /TSAC/ TSAC(120,3)
C
C
      DO 230 IXXX1=1,MXIL
        IL=ILINO(IXXX1)
        TLAC(IL)=0.
        DO 210 IXXX2=1,MXIS
          IS=ISINO(IXXX2)
          LCRLS(IL,IS)=0
  210   CONTINUE
        DO 220 J=1,MXJ
          TSAC(IL,J)=0.
  220   CONTINUE
C
  230 CONTINUE
      DO 250 IXXX1=1,MXIS
        IS=ISINO(IXXX1)
        DO 240 J=1,MXJ
          AIAC(IS,J)=0.
          LCRS(IS,J)=0
C
  240   CONTINUE
  250 CONTINUE
```

```
      DO 260 IXXX1=1,MXI
        I=INO(IXXX1)
        LCRL(I)=0
  260 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE STEPO
C                                                          800620 115623469
C*****************************************************************************
C*  SETS SOME LCRL'S                                                         *
C*****************************************************************************
C
      COMMON /COND/ COND(150)
      COMMON /IL/ IL
      COMMON /ILINO/ ILINO(120)
      COMMON /IS/ IS
      COMMON /ISINO/ ISINO(150)
      COMMON /ISRU/ ISRU(120,30)
      COMMON /ISXREF/ ISXREF(150)
      COMMON /LCRL/ LCRL(150)
      COMMON /MXIL/ MXIL
      COMMON /MXIS/ MXIS
      COMMON /NDS/ NDS(120)
C
C
      DO 240 IXXX1=1,MXIL
        IL=ILINO(IXXX1)
        IF(.NOT.(COND(IL).EQ.1)) GO TO 230
          LCRL(IL)=3
C.........THESE 4 STMTS IMPLEMENT THE POINTER MATRIX
          NXXX1=NDS(IL)
          IF(NXXX1.EQ.0) GO TO 220
          DO 210 JXXX1=1,NXXX1
            IS=ISRU(IL,JXXX1)
            LCRL(IS)=3
  210     CONTINUE
  220     CONTINUE
  230   CONTINUE
  240 CONTINUE
      DO 260 IXXX1=1,MXIS
        IS=ISINO(IXXX1)
        IF(.NOT.(COND(IS).EQ.1)) GO TO 250
          LCRL(IS)=3
  250   CONTINUE
  260 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE STEP1
C                                                          800620 115627248
C*****************************************************************************
C*  CALCULATES TSAC(IS,J) AND LCRS(IS,J)                                     *
C*****************************************************************************
C
      COMMON /DUM/ DUM
      INTEGER DUM
      COMMON /IS/ IS
      COMMON /ISINO/ ISINO(150)
      COMMON /LCRS/ LCRS(150,3)
      COMMON /LRU/ LRU(150)
      COMMON /MXD/ MXD
      COMMON /MXIS/ MXIS
      COMMON /TIAC/ TIAC(150,6)
      COMMON /TSAC/ TSAC(120,3)
C
C
      DO 260 IXXX1=1,MXIS
        IS=ISINO(IXXX1)
        TSAC(IS,1)=AMIN1(TIAC(IS,1),TIAC(IS,2),TIAC(IS,3))
        TSAC(IS,2)=AMIN1(TIAC(IS,4),TIAC(IS,5))
        TSAC(IS,3)=TIAC(IS,6)
        IF(.NOT.(LRU(IS).EQ.0)) GO TO 250
          DO 220 DUM=1,3
            IF(.NOT.(TIAC(IS,DUM).EQ.TSAC(IS,1))) GO TO 210
              LCRS(IS,1)=DUM
  210       CONTINUE
  220     CONTINUE
          DO 240 DUM=4,5
            IF(.NOT.(TIAC(IS,DUM).EQ.TSAC(IS,2))) GO TO 230
              LCRS(IS,2)=DUM
  230       CONTINUE
  240     CONTINUE
          LCRS(IS,3)=6
  250   CONTINUE
  260 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE STEP2
C                                                          800620 115632728
C*****************************************************************************
C*  CALCULATES TSAC(IL,J) AND TLAC(IL)                                      *
C*****************************************************************************
C
      COMMON /IL/ IL
      COMMON /ILINO/ ILINO(120)
      COMMON /IS/ IS
      COMMON /ISRU/ ISRU(120,30)
      COMMON /ISXREF/ ISXREF(150)
      COMMON /J/ J
      COMMON /LCRS/ LCRS(150,3)
      COMMON /MXIL/ MXIL
      COMMON /MXIS/ MXIS
      COMMON /MXJ/ MXJ
      COMMON /NDS/ NDS(120)
      COMMON /NTL/ NTL(150)
      COMMON /QPA/ QPA(120,30)
      COMMON /TLAC/ TLAC(120)
      COMMON /TSAC/ TSAC(120,3)
      COMMON /TIAC/ TIAC(150,6)
C
      DO 240 J=1,MXJ
        DO 230 IXXX2=1,MXIL
          IL=ILINO(IXXX2)
C.........THESE 4 STMTS IMPLEMENT THE POINTER MATRIX
          NXXX1=NDS(IL)
          IF(NXXX1.EQ.0) GO TO 220
          DO 210 JXXX1=1,NXXX1
            IS=ISRU(IL,JXXX1)
            TSAC(IL,J)=TSAC(IL,J)+(TSAC(IS,J)*QPA(IL,JXXX1)/NTL(IS))
     +        +(TIAC(IL,LCRS(IS,J))/NDS(IL))
  210     CONTINUE
          GO TO 230
  220     CONTINUE
         IF(J.EQ.1) K1=1
         IF(J.NE.1) K1=2*J
         TSAC(IL,J)=TIAC(IL,K1)
  230   CONTINUE
  240 CONTINUE
      DO 250 IXXX1=1,MXIL
        IL=ILINO(IXXX1)
        TLAC(IL)=AMIN1(TSAC(IL,1),TSAC(IL,2),TSAC(IL,3))
  250 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE STEP3
C                                                              800620 115636632
C*****************************************************************************
C*  CALCULATES LCRL(IL) AND LCRS(IL,IS)                                      *
C*****************************************************************************
C
      COMMON /IL/ IL
      COMMON /ILINO/ ILINO(120)
      COMMON /IS/ IS
      COMMON /ISINO/ ISINO(150)
      COMMON /ISRU/ ISRU(120,30)
      COMMON /J/ J
      COMMON /LCRL/ LCRL(150)
      COMMON /LCRLS/ LCRLS(120,150)
      COMMON /LCRS/ LCRS(150,3)
      COMMON /MXIL/ MXIL
      COMMON /MXIS/ MXIS
      COMMON /MXJ/ MXJ
      COMMON /NDS/ NDS(120)
      COMMON /TLAC/ TLAC(120)
      COMMON /TSAC/ TSAC(120,3)
C
C
      DO 230 IXXX1=1,MXIL
        IL=ILINO(IXXX1)
        DO 220 J=1,MXJ
          IF(.NOT.((TSAC(IL,J).EQ.TLAC(IL)).AND.(LCRL(IL).EQ.
     +      0))) GO TO 210
            LCRL(IL)=J
  210     CONTINUE
  220   CONTINUE
  230 CONTINUE
      DO 280 IXXX1=1,MXIL
        IL=ILINO(IXXX1)
C.......THESE 4 STATEMENTS IMPLEMENT THE POINTER MATRIX
        NXXX1=NDS(IL)
        IF(NXXX1.EQ.0) GO TO 275
        DO 270 IXXX2=1,NXXX1
          IS=ISRU(IL,IXXX2)
          IF(.NOT.(LCRS(IS,LCRL(IL)).EQ.1)) GO TO 240
            LCRLS(IL,IS)=1
  240     CONTINUE
          IF(.NOT.((LCRS(IS,LCRL(IL)).EQ.3).OR.(LCRS(IS,LCRL(IL)).EQ.
     +      5).OR.(LCRS(IS,LCRL(IL)).EQ.6))) GO TO 260
            LCRLS(IL,IS)=3
  260     CONTINUE
```

```
            IF(.NOT.((LCRS(IS,LCRL(IL)).EQ.2).OR.(LCRS(IS,LCRL(IL)).EQ.
     +        4))) GO TO 250
              LCRLS(IL,IS)=2
  250       CONTINUE
  270     CONTINUE
  275     CONTINUE
  280   CONTINUE
C
        RETURN
        END
```

```
      SUBROUTINE STEP4
C                                                          800620 115640822
C*****************************************************************************
C*  CALCULATES LCRL(I)                                                       *
C*****************************************************************************
C
      COMMON /AIAC/ AIAC(150,3)
      COMMON /DUM/ DUM
      INTEGER DUM
      COMMON /IL/ IL
      COMMON /ILINO/ ILINO(120)
      COMMON /ILXREF/ ILXREF(120)
      COMMON /IS/ IS
      COMMON /ISINO/ ISINO(150)
      COMMON /ISRU/ ISRU(120,30)
      COMMON /ISXREF/ ISXREF(150)
      COMMON /LCRL/ LCRL(150)
      COMMON /LCRLS/ LCRLS(120,150)
      COMMON /MXD/ MXD
      COMMON /MXIL/ MXIL
      COMMON /MXIS/ MXIS
      COMMON /NDL/ NDL(150)
      COMMON /NDS/ NDS(120)
      COMMON /NTL/ NTL(150)
      COMMON /QPA/ QPA(120,30)
      COMMON /TIAC/ TIAC(150,6)
      COMMON /TQPA/ TQPA(150,120)
      INTEGER TQPA
      INTEGER COUNT
      INTEGER R2
      INTEGER TEST1
      INTEGER TEST1A
      INTEGER TEST1B
      INTEGER TEST2
      INTEGER TEST3
      INTEGER TEST4
      INTEGER TEMP
C
      DO 250 DUM=2,3
        DO 240 IXXX2=1,MXIL
          IL=ILINO(IXXX2)
          R2=DUM
          IF(.NOT.(LCRL(IL).EQ.2)) GO TO 210
            R2=R2+2
  210     CONTINUE
C.........THESE 4 STMTS IMPLEMENT THE POINTER MATRIX
          NXXX1=NDS(IL)
```

```
          IF(NXXX1.EQ.0) GO TO 230
          DO 220 JXXX1=1,NXXX1
            IS=ISRU(IL,JXXX1)
            AIAC(IS,DUM)=AIAC(IS,DUM)+TIAC(IS,R2)*QPA(IL,JXXX1)/NTL(IS)
  220     CONTINUE
  230     CONTINUE
  240   CONTINUE
  250 CONTINUE
      DO 430 IXXX1=1,MXIS
      TEST1=0
      TEST1A=1
      TEST1B=1
      TEST2=0
      TEST3=0
      TEST4=0
        IS=ISINO(IXXX1)
        COUNT=0
        IF(.NOT.(NDL(IS).GT.1)) GO TO 310
          TEST1A=0
C.........THESE 4 STMTS IMPLEMENT THE POINTER MATRIX
          NXXX1=NTL(IS)
          IF(NXXX1.EQ.0) GO TO 300
          DO 290 JXXX1=1,NXXX1
            IL=TQPA(IS,JXXX1)
            COUNT=COUNT+1
            IF(.NOT.(COUNT.EQ.1)) GO TO 260
              TEMP=LCRLS(IL,IS)
  260       CONTINUE
            IF(.NOT.((COUNT.GT.1).AND.(TEST1B.EQ.1))) GO TO 280
              IF(.NOT.(LCRLS(IL,IS).NE.TEMP)) GO TO 270
                TEST1B=0
  270         CONTINUE
              TEMP=LCRLS(IL,IS)
  280       CONTINUE
  290     CONTINUE
  300     CONTINUE
  310   CONTINUE
        IF(.NOT.(NDL(IS).EQ.1)) GO TO 311
          IL=TQPA(IS,1)
          TEMP=LCRLS(IL,IS)
  311   CONTINUE
        IF(.NOT.((TEST1A.EQ.1).OR.(TEST1B.EQ.1))) GO TO 320
          TEST1=1
  320   CONTINUE
        IF(.NOT.((TEST1A.EQ.0).AND.(TEST1B.EQ.0))) GO TO 360
C.........THESE 4 STMTS IMPLEMENT THE POINTER MATRIX
          NXXX1=NTL(IS)
```

```
          IF(NXXX1.EQ.0) GO TO 350
          DO 340 JXXX1=1,NXXX1
            IL=TQPA(IS,JXXX1)
            IF(.NOT.(LCRL(IL).EQ.3)) GO TO 330
              TEST2=1
  330       CONTINUE
  340     CONTINUE
  350     CONTINUE
  360   CONTINUE
        IF(.NOT.(((TEST1A.EQ.0).AND.(TEST1B.EQ.0)).AND.(TEST2.EQ.
     +    0))) GO TO 390
          IF(.NOT.(AIAC(IS,3).LE.AIAC(IS,2))) GO TO 370
            TEST3=1
  370     CONTINUE
          IF(.NOT.(TEST3.EQ.0)) GO TO 380
            TEST4=1
  380     CONTINUE
  390   CONTINUE
        IF(.NOT.((TEST1.EQ.1).AND.(LCRL(IS).EQ.0))) GO TO 400
          LCRL(IS)=TEMP
  400   CONTINUE
        IF(.NOT.(((TEST2.EQ.1).OR.(TEST3.EQ.1)).AND.(LCRL(IS).EQ.
     +    0))) GO TO 410
          LCRL(IS)=3
  410   CONTINUE
        IF(.NOT.((TEST4.EQ.1).AND.(LCRL(IS).EQ.0))) GO TO 420
          LCRL(IS)=2
  420   CONTINUE
  430 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE OUT9A
C                                                              800620 115652880
C*****************************************************************************
C*  WRITES THE ITEM MAINTENANCE DATA FILE                                    *
C*  TO CHANNEL 14                                                            *
C*****************************************************************************
C
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      COMMON /FULLXX/ FULLXX
      INTEGER FULLXX
      COMMON /BCMH/ BCMH(150)
      COMMON /BMH/ BMH(150)
      COMMON /COND/ COND(150)
      COMMON /DMH/ DMH(150)
      COMMON /FPR/ FPR(150)
      COMMON /I/ I
      COMMON /INO/ INO(150)
      COMMON /IPCF/ IPCF(150)
      REAL IPCF
      COMMON /LCRL/ LCRL(150)
      COMMON /MTBMI/ MTBMI(150,4)
      REAL MTBMI
      COMMON /MXI/ MXI
      COMMON /NRTS/ NRTS(150)
      REAL NRTS
      COMMON /RIP/ RIP(150)
      COMMON /RMH/ RMH(150)
      COMMON /RTS/ RTS(150)
    1 FORMAT(1H ,I3,4I8,I4,I3,I5,3I4,4I4,I1)
    2 FORMAT(1H*)
C
C
C
C
      DO 210 IXXX1=1,MXI
        I=INO(IXXX1)
        I1=MTBMI(I,1)
        I2=MTBMI(I,2)
        I3=MTBMI(I,3)
        I4=MTBMI(I,4)
        I5=INT(FPR(I)*1000+.99)
        I6=INT(RIP(I)*100+.99)
        I7=INT(IPCF(I)*100+.99)
        I8=INT(RTS(I)*1000+.99)
        I9=INT(NRTS(I)*1000+.99)
        I10=INT(COND(I)*1000+.99)
```

```
        I11=INT(RMH(I)*100+.99)
        I12=INT(BCMH(I)*100+.99)
        I13=INT(BMH(I)*100+.99)
        I14=INT(DMH(I)*100+.99)
       WRITE(14, 1) I,I1,I2,I3,I4,I5,I6,I7,I8,I9,I10,I11,I12,I13,
     +I14,LCRL(I)
  210 CONTINUE
      WRITE(14, 2)
C
      RETURN
      END
```

```
      SUBROUTINE OTAB1
C                                                          800620 115655511
C*****************************************************************************
C*  REPAIR LEVEL ANALYSIS                                                    *
C*****************************************************************************
C
      COMMON /PRNTXX/ PRNTXX
      INTEGER PRNTXX
      COMMON /FULLXX/ FULLXX
      INTEGER FULLXX
      COMMON /I/ I
      COMMON /INO/ INO(150)
      COMMON /LCRL/ LCRL(150)
      COMMON /LRU/ LRU(150)
      COMMON /MXI/ MXI
      COMMON /RL/ RL(150)
      INTEGER RL
      DATA XXBL/1H /
      DATA XXSTAR/1H*/
    1 FORMAT(1H1/46X,37HOUTPUT TABLE 1: REPAIR LEVEL ANALYSIS)
    2 FORMAT(59X,11H(CONTINUED))
    3 FORMAT(//40X,7HLRU (1),9X,17HREPAIR LEVEL - RL,10X,7HRESULTS/29X,4
     +HITEM,7X,2HOR,11X,24H-----------------------,6X,10HDIFF. FROM/29X
     +,5HINDEX,6X,7HSRU (0),6X,4HBASE,4X,5HDEPOT,4X,7HDISCARD,6X,16HCONT
     +RACTOR INPUT/30X,3H(I),20X,3H(1),6X,3H(2),7X,3H(3))
    4 FORMAT(30X,I3,9X,I1,11X,A1,8X,A1,9X,A1,16X,A1)
C
C
C
C
      IPAGE=40
      IFLAG=1
      XXR=XXBL
      XXB=XXBL
      XXF=XXBL
      XXD=XXBL
      DO 270 IXXX1=1,MXI
        I=INO(IXXX1)
        IF(.NOT.(RL(I).NE.LCRL(I))) GO TO 210
          XXR=XXSTAR
  210   CONTINUE
        IF(.NOT.(LCRL(I).EQ.1)) GO TO 220
          XXB=XXSTAR
  220   CONTINUE
        IF(.NOT.(LCRL(I).EQ.2)) GO TO 230
          XXD=XXSTAR
  230   CONTINUE
```

```
      IF(.NOT.(LCRL(I).EQ.3)) GO TO 240
        XXF=XXSTAR
  240 CONTINUE
      IF(.NOT.(IPAGE.EQ.40)) GO TO 260
        WRITE( 7, 1)
        IPAGE=1
        IF(.NOT.(IFLAG.NE.1)) GO TO 250
          WRITE( 7, 2)
  250   CONTINUE
        WRITE( 7, 3)
  260 CONTINUE
      WRITE( 7, 4) I,LRU(I),XXB,XXD,XXF,XXR
      IFLAG=0
      IPAGE=IPAGE+1
      XXR=XXBL
      XXB=XXBL
      XXF=XXBL
      XXD=XXBL
  270 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE INITAL
C                                                          800620 115702567
C.....INITIALIZES VARIABLES TO DEFAULT VALUES.
C
      COMMON /NTABXX/ NTABXX
      COMMON /NERRXX/ NERRXX
      COMMON /DINO/ DINO(6)
      INTEGER DINO
      COMMON /DIXREF/ DIXREF(1)
      INTEGER DIXREF
      COMMON /DUINO/ DUINO(6)
      INTEGER DUINO
      COMMON /DUM/ DUM
      INTEGER DUM
      COMMON /DUMM/ DUMM
      INTEGER DUMM
      COMMON /DXREF/ DXREF(1)
      INTEGER DXREF
      COMMON /I/ I
      COMMON /IL/ IL
      COMMON /ILINO/ ILINO(120)
      COMMON /ILXREF/ ILXREF(120)
      COMMON /INO/ INO(150)
      COMMON /IS/ IS
      COMMON /ISINO/ ISINO(150)
      COMMON /ISRU/ ISRU(120,30)
      COMMON /ISXREF/ ISXREF(150)
      COMMON /IXREF/ IXREF(150)
      COMMON /J/ J
      COMMON /JINO/ JINO(3)
      COMMON /JXREF/ JXREF(1)
      COMMON /MXD/ MXD
      COMMON /MXDD/ MXDD
      COMMON /MXI/ MXI
      COMMON /MXIL/ MXIL
      COMMON /MXIS/ MXIS
      COMMON /MXJ/ MXJ
      COMMON /NDS/ NDS(120)
      COMMON /NTL/ NTL(150)
      COMMON /QPA/ QPA(120,30)
      COMMON /TPA/ TPA(150,120)
      COMMON /TQPA/ TQPA(150,120)
      INTEGER TQPA
C
      NTABXX=0
      NERRXX=0
C
```

```
      DO     10 DUMM=1,6
        DINO(DUMM)=DUMM
   10 CONTINUE
C
      MXI=150
      MXJ=3
      MXD=6
      MXIL=120
      MXIS=150
      MXDD=6
C
      DO     30 DUM=1,6
        DUINO(DUM)=DUM
   30 CONTINUE
C
      DO     40 IXXX1=1,1
        DXREF(IXXX1)=IXXX1
        DIXREF(IXXX1)=IXXX1
        JXREF(IXXX1)=IXXX1
   40 CONTINUE
C
      DO     50 I=1,150
        INO(I)=I
   50 CONTINUE
C
      DO     60 IL=1,120
        NDS(IL)=0
        DO     60 IXXX=1,30
          ISRU(IL,IXXX)=0
          QPA(IL,IXXX)=0.00000
   60 CONTINUE
C
      DO     70 IS=1,150
        NTL(IS)=0
        DO     70 IXXX=1,120
          TQPA(IS,IXXX)=0
          TPA(IS,IXXX)=0.00000
   70 CONTINUE
C
      DO     80 IL=1,120
        ILINO(IL)=IL
   80 CONTINUE
C
      DO     90 IXXX1=1,150
        IXREF(IXXX1)=IXXX1
        ISXREF(IXXX1)=IXXX1
   90 CONTINUE
```

```
C
      DO   100 IS=1,150
        ISINO(IS)=IS
  100 CONTINUE
C
      DO   110 IXXX1=1,120
        ILXREF(IXXX1)=IXXX1
  110 CONTINUE
C
      DO   120 J=1,3
        JINO(J)=J
  120 CONTINUE
C
      RETURN
      END
```